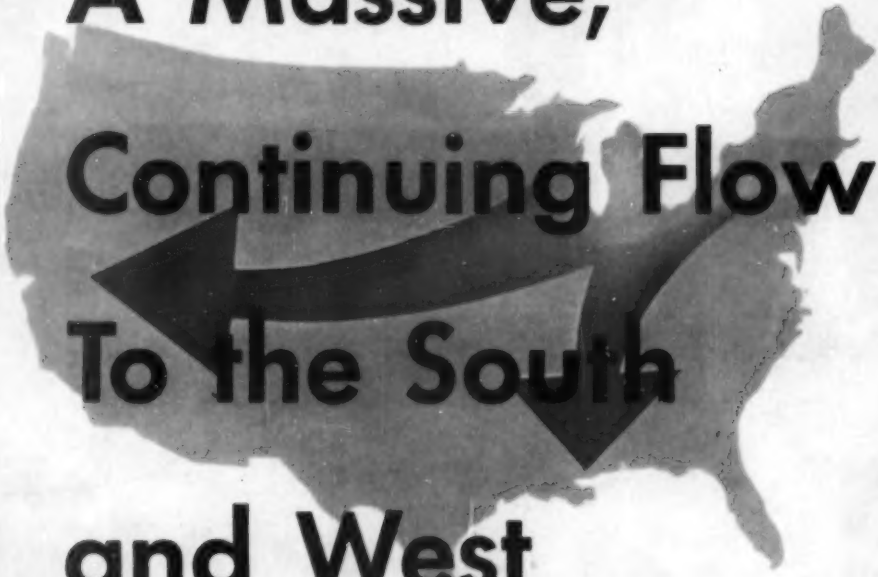


BUSINESS WEEK

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PAGE 22

Industry Moves—

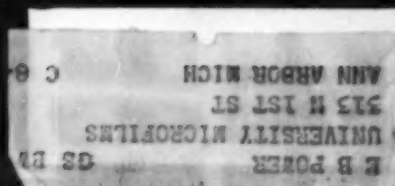
**A Massive,
Continuing Flow
To the South
and West**



Special Report Page 78

A MCGRAW HILL PUBLICATION

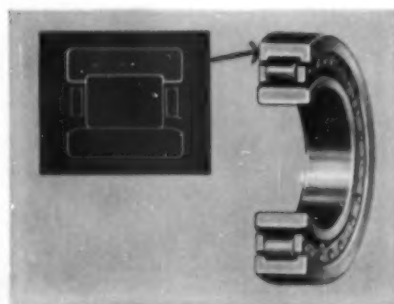
AUG. 13, 1955





No chance for "bugs"!

Modern methods plus modern equipment! That's how the American farmer virtually eliminates the element of chance. He *knows* he can depend on his equipment to get the job done—on time! ☆ Farm equipment manufacturers know, too, that confidence like this results only from first-rate, on-the-job performance. That's why so many standardize on Bower Spher-O-Honed Bearings. Past experience has proved to them that the name *Bower* on a roller bearing stands for higher product quality and unequaled engineering advancements. For instance, the refinements shown at right are making Bower Bearings last longer and perform better—practically eliminating maintenance! ☆ Whatever your product, if it uses tapered, straight or journal roller bearings, specify Bower!



TWO-LIP RACE INCREASES RIGIDITY

Two parallel shoulders made integral with the outer race, as shown in red above, increase rigidity and durability—keep rollers in proper alignment. Precision-made rollers and races assure quieter, smoother operation.

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"Vision is Indispensable to Progress"

How a speck of crystal is changing your life—your world

Advances so startling that only ten years ago they might have been subjects for science fiction are being chalked up by electronics—the fast-growing industry that harnesses electrons with vacuum tubes and their equivalents. More and more, as human impulses prove too slow to control the latest tools of science and industry, miniature tubes and semiconductor devices, such as 1/10 oz. transistors are taking over.

Today new radars keep tabs on storms and hurricanes, bring in ships and planes. Promised for the future is an electronic unit to lead the blind. Other devices now perform elaborate record-keeping tasks for business.

As the electronic microscope and betatron point to victory over dread diseases, another electronic instrument makes blood counts in seconds. Equipped with tiny transistors, midget radios run for years. New solar batteries take their power from the sun. TV programs recorded on magnetic tape, light amplifiers, electronic air conditioning and other appliances are in various stages of development.

Some of the most impressive work of electronics shows up in industrial

controls—"black boxes" packed with electronic magic—which direct rivers of steel, guide precision drilling, measure metal thickness and detect flaws.

Guided by self-reliant enterprise, the electronics industry has already found ways to lighten man's tasks and lengthen his leisure, to entertain, defend and heal him. Only in a free competitive system can progress take such giant strides, achieving so much good for so many to share.

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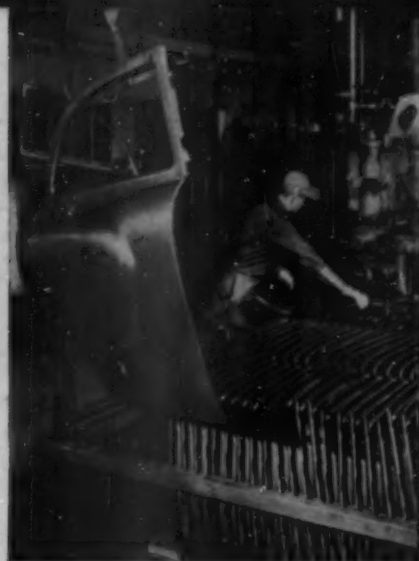
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Sheet Steel is fed into a blanking press and sheared to fender outline.



Smoothly Contoured door panels, each shaped from a sheet of steel, move steadily on conveyors.



Eight-a-Minute—Steel sheets are deep drawn to fender contours in this huge, 450-ton double acting ram press where the cold steel flows evenly under tremendous pressure.

Shapeliness

The New Gives

When you look at the low, smooth-flowing lines of today's automobiles and admire their graceful styling, do you ever wonder how steel becomes so shapely?

The appeal of an automobile's design is far more than just the dream of a designer worked out from the artistic sketches and mock-up models he creates. It is the translation of his clay models by engineers and production men into practical contoured curves of steel sheet.

In the early days, the designer was limited by what steel could do and restricted by his own production equipment.

Today, automation has improved and speeded production. The techniques for making steel have advanced apace. Automakers can draw on the resources of technical know-how and steelmaking facilities equipped with the latest in technological controls, such as the new rolling mills at Pittsburgh Steel Company, for producing hot and cold rolled steel sheet.

So today the designer's range of ideas is becoming increasingly unlimited because better production and new quality in steel are giving



Complex Automatic equipment assembles inner and outer door panel where automation speeds production.



Assembled Doors, solidly constructed, yet gracefully styled, are ground and polished for perfect surface.

Fashion In Steel Quality Designers Vast Horizons

him ever-widening horizons for the creation of practical new designs. At Pittsburgh Steel this new quality in steel is called shapeliness.

• **What Is It?**—Shapeliness is the ability of steel to be drawn under tremendous pressure to the severest contours of design, while retaining its strength and giving a consistently smooth surface. Beyond that, it must maintain this quality uniformly in sheet after sheet and coil after coil to provide smooth, trouble-free performance on high-speed production lines.

You will quickly grasp the importance of this quality if you will take a look at today's production of sleekly-designed fenders and doors for beautiful new automobile styles.

The sheet from Pittsburgh Steel to provide these shapes has the necessary internal qualities: exact chemical analysis, cleanliness, and fine grain size. And it has the most desired external qualities: uniform dimensional accuracy and surface cleanliness.

It must have these qualifications throughout each sheet and from sheet to sheet as it is fed into power-

ful, high-speed press operations in order to minimize the possibility of grainy surface, buckles, wrinkles, tears, stretcher strains, or skin breaks.

It is shapeliness, then, that assures a snug-fitting door or fender with a clean, smooth surface for painting . . . one that is attractive on the showroom floor and a stand-out on the road.

• **How It Pays**—Not every steel-maker can produce this quality of shapeliness in steel with the same success. Some, by reason of new equipment and technical experience, can meet the manufacturers' requirements more consistently than others.



In the Showroom and on the road, designer's creation becomes a beautifully practical reality of steel shapeliness.

If the production of your products requires better than average quality sheet steel, why not explore the opportunities Pittsburgh Steel offers you? Your orders will get personal attention from the time they are entered on the books until your product is completed. A phone call today to the district office nearest you may prove worthwhile.

"Everything New But The Name"

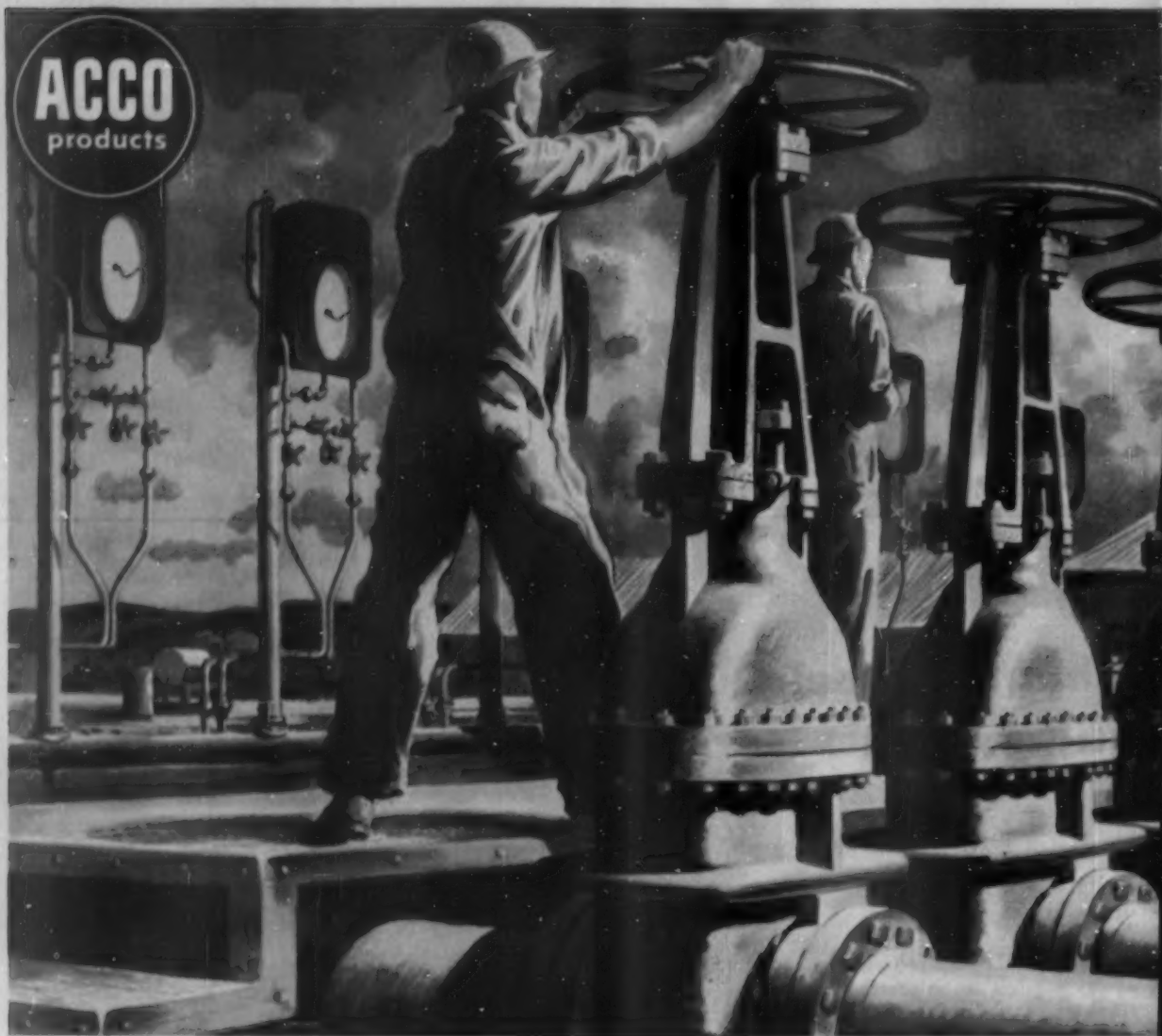
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Write for your copy of the color brochure "The New Pittsburgh Steel Company."



Like all R-P&C Valves—
R-P&C ELECTRIC FURNACE IRON VALVES
are "Designed for Dependability"

• All cast-iron parts of R-P&C valves are made from electric furnace iron. This better method of melting and refining iron, for which you pay no premium, gives you better valves—longer-lasting, more dependable.

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Write for Bulletin DH-18A, "ELECTRIC IRON VALVES." It gives helpful information on valve designs and specifications, also technical data

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Quality Control marks each operation in producing R-P&C Valves and Fittings. Castings are produced under latest metallurgical controls . . . dimensional accuracy of each valve part is check-gauged . . . hydrostatic and other tests on every valve establish the high performance you can confidently expect.



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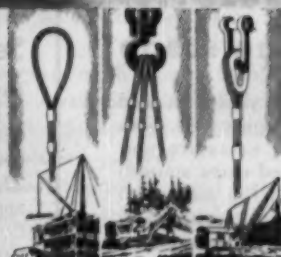
IN ENGLAND: BRITISH WIRE PRODUCTS, LIMITED

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American Chain makes welded and weldless chain of all types and sizes for countless industrial, transportation, farm and home uses.



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Cutting wheels for all types of abrasive cutting machines; also, resinoid snagging wheels for portable grinders and masonry cutting blades.

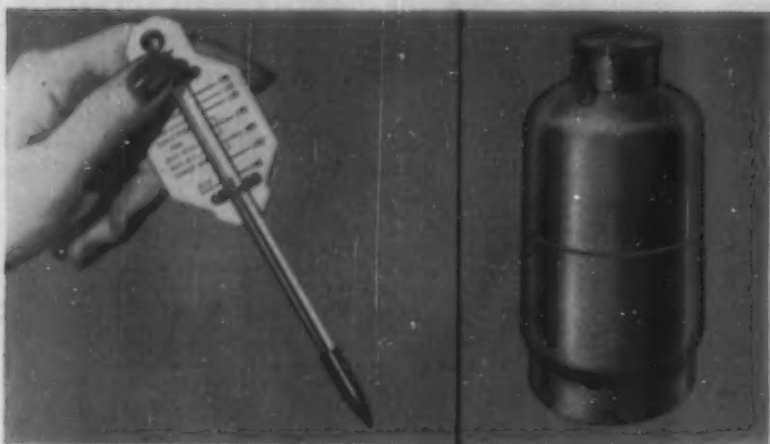
For information on any ACCO product address Market Development Department,
American Chain & Cable Company, Inc., 929 Connecticut Avenue, Bridgeport, Connecticut



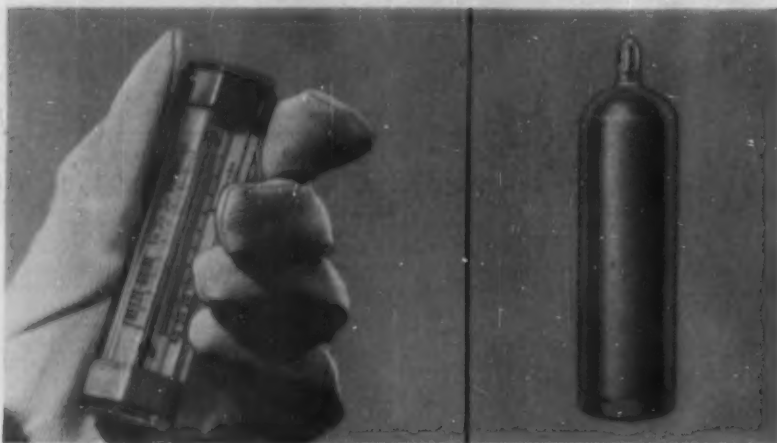
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The LP-gas dealer provides propane gas (bottled gas) for cooking, home heating and hot water heating in this big propane cylinder.



A refrigeration supply house services the meat packing plant with refrigerant gas shipped in this 150-pound anhydrous ammonia cylinder.

Roast beef, rare...or a quick freeze... Hackney cylinders stand behind the scene

Wherever compressed gases are put to work in home or industry, Hackney lightweight cylinders confine the gases safely—are easy to handle—economical to haul. Oxygen for the diver, anesthetic for the operating room, acetylene for the welding torch—these are other everyday uses for Hackney compressed gas cylinders.

Seamless Hackney cylinders, and two-piece models with only one girth weld, are deep drawn to assure uniform wall thickness and extra smooth surfaces. Heat treated for maximum strength. Made in many types and sizes to meet the needs of compressed gas producers, shippers and users. Write for details.

Pressed Steel Tank Company

Manufacturer of Hackney Products

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CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

READERS REPORT

Change of Face

Dear Sir:

Your July 23, '55 issue seems to stand out in a very "readable" way. Not being a printer, is it that you changed the format?

J. J. LYNCH

BOSTON, MASS.

• Reader Lynch has good perception. We did introduce a new way of presenting some of our editorial material in that issue. Inside most of our regular departments we made all the news sections uniform in appearance. They are set in larger size type, in wider measure, and each item has a separate headline. We're pleased that it is more "readable" and hope that the changes in format planned for the near future will make it even more so.

Private Millions

Dear Sir:

If you had said that the government plans to build a \$26-billion aviation gasoline and butadiene plant at Houston in the item under Business Briefs [BW—Jul.25 '55,p34], I would have thought nothing of it. But, when you say that private business enterprise will spend that much for the plant, I cannot believe it. Will you please say that again?

CHAS. L. DOAN

WELSH, LA.

• We won't say that again, but we will say it should have been \$26-million. Sorry.

See Your Dealer

Dear Sir:

It was a pleasure to see your article appearing in the Personal Business section [p. 135] of the July 23, '55 issue. We wholeheartedly applaud your encouragement of office modernization through coordinated planning.

Your mention of the Executive Furniture Guild as a source of information is highly commendable. This group of dealers does an outstanding job in the office furniture industry and is recognized as a leader in office planning. I understand there are approximately 46 dealers throughout the United States with this service.

However, you did fail to mention the Certified Office Planning Service dealers in your article... 92 dealers throughout the U.S. offer this

Fire struck both printing plants . . .



Fire which broke out in the basement of an unsprinklered printing plant was too big to be controlled by hand extinguishers when discovered. Three occupants were forced to use a fire escape to get out.

Fire which started in the basement of the Meredith Publishing Company of Des Moines, Iowa, was extinguished by the Grinnell Automatic Sprinkler System before firemen — summoned by the automatic alarm — arrived.

Once installed, Grinnell Automatic Sprinklers stand guard constantly, day and night, year after year, to quench a fire at its start. For over 77 years they have been protecting industrial, commercial, and institutional buildings — *and lives* — against loss by fire.

Can you afford to take the chance of a serious fire in



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Reductions of from 50 to 90% in fire insurance rates usually offset the cost of a Grinnell Automatic Sprinkler System within a few years. After that, these savings are clear profit . . . yielding an excellent return on the investment. While protecting your business and future, the system pays for itself, and then *pays you*.

Grinnell Sprinklers can be installed without bother or annoyance. Ask us to survey your property and submit an estimate. No cost or obligation. Grinnell Company, Inc., 265 West Exchange Street, Providence, R. I.



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**a motor
that matches
the quality
of your product**



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Outstanding motor quality and uniformity are the result of our high degree of specialization in both equipment and methods, combined with rigid process control.

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FRACTIONAL HORSEPOWER MOTORS**



For motor-driven
office equipment.



Motor parts for
household appliances.



Turbine for canister-type
vacuum cleaner.

service to their customers without charge. They do it to help them merchandise the office equipment they sell. Because this plan has the backing of four other trade associations representing their industries and some of the top consultants in the country on such subjects as color, layout, store display, and lighting, it is recognized as the most authoritative packaged plan being marketed. . . .

ROBERT A. SPELMAN

ASST. SECRETARY
WOOD OFFICE FURNITURE INSTITUTE
WASHINGTON, D. C.

Dear Sir:

Under the heading of Personal Business in your issue of July 23, 1955 [page 135], you discuss a subject with which we have been closely concerned for nearly half a century. In the Annual Special Office Furniture Section, included in the June 1952 issue of OFFICE APPLIANCES, one article was titled, "The Psychology of Office Furniture." It dealt with the same theme as your discussion, approaching the problem from the dealer's viewpoint rather than the ultimate user's.

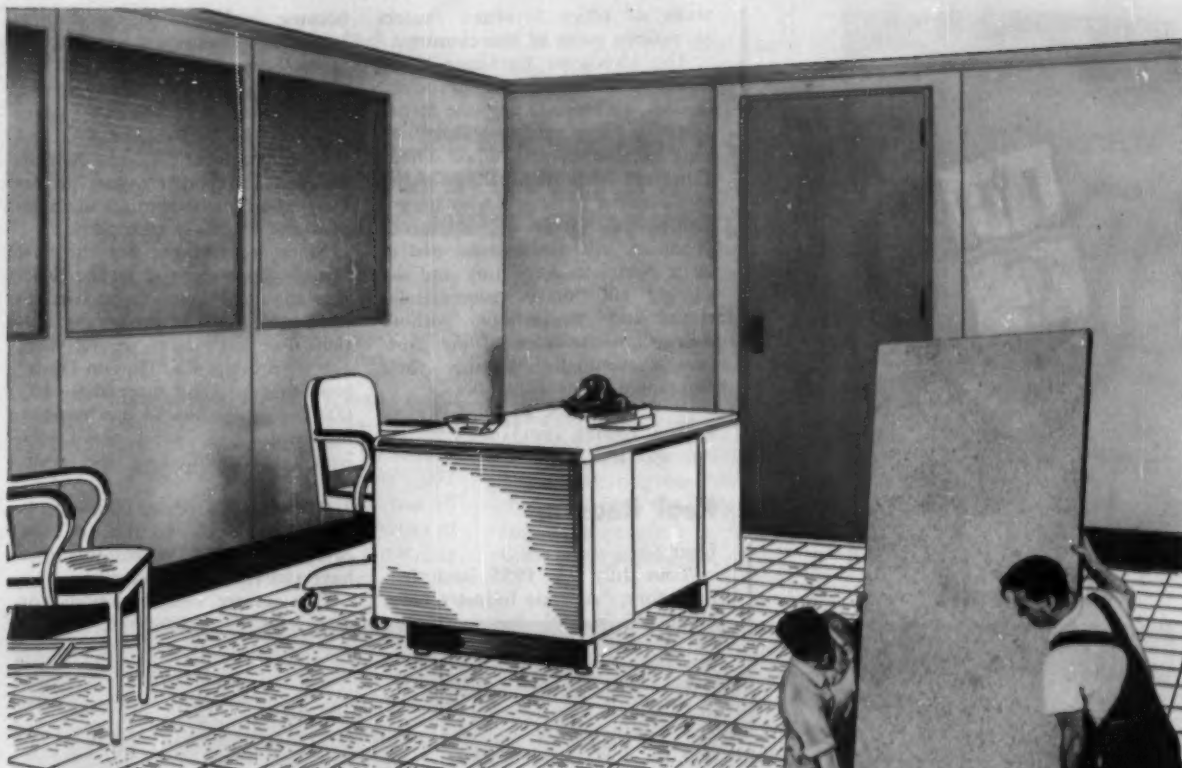
To indicate the parallel thinking, we quote a few sentences from the article:

"A well equipped office is one in which every nook and corner is fitted with a view to charm the eyes and comfort the body. Desks and chairs must show design harmony. Cabinets must hint order and method in appearance, shape and color. Rugs and walls are parts of a color scheme."

In all the succeeding years beauty and utility have been stressed as twin factors that the office furniture dealer should sell to the office user. A third factor, of course, is the one you feature as Rule 1—the office should reflect the personality of the individual and the nature of his work or business.

The point at which we come to the parting of the ways is in your suggestions about how to initiate action to get an office redecorated. We think your recommendations are too limited. A third "broad step" should be, "Consult your office furniture dealer."

Literally hundreds of office furniture dealers throughout the U. S. are equipped to do a complete package job in designing, decorating and furnishing an office. In the past 10 or 15 years interior decorators, many of whom are members of organizations of professional decorators, have been added to the



**make more room
without extra space...**



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. . . are noncombustible, moderately priced . . . come in pleasing colors***

New Johns-Manville Class A Movable Walls offer you advantages never before combined in an asbestos movable wall. They are modestly priced. They are noncombustible. They have a textured, stipple finish in restful colors. They reduce maintenance and relocation costs to a new low.

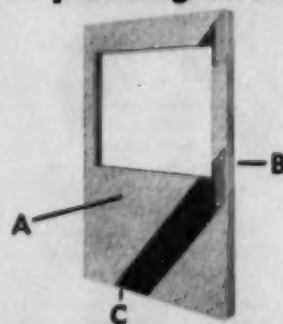
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finished partitions, can be repainted with ordinary paint.

Undivided responsibility for a complete job

These flush or glazed partitions are erected by the Johns-Manville Construction Department complete with doors, door hardware, glass and trim.

An estimate will convince you that the cost of J-M Movable Walls compares favorably with other types of wall construction. For details, write Johns-Manville, Department BW, Box 158, New York 16, N. Y. In Canada write 365 Lakeshore Road East, Port Credit, Ontario.



- A** Noncombustible asbestos-cement surfaces
- B** Generous reinforcing for added strength
- C** Noncombustible all-mineral insulating core

See "MEET THE PRESS" on NBC-TV, sponsored on alternate Sundays by Johns-Manville



Johns-Manville



Top Flight Hotels in Latin America

In South America and Mexico—Intercontinental Hotels Corporation leads the way in hospitality. All IHC hotels offer modern accommodations, fine food, interesting entertainment and friendly bi-lingual service. Businessmen appreciate the prestige of IHC hotels and their excellent conference and convention facilities. Most of our hotels also provide glamorous vacation features such as outdoor swimming pools and sun patios.

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MARACAIBO, VENEZUELA
Hotel Del Lago
BELEM, PARA, BRASIL
Hotel Grande
MEXICO CITY
Hotel Reforma
CARACAS, VENEZUELA
Hotel Tamanaco
BOGOTA, COLOMBIA
Hotel Tequendama
MONTEVIDEO, URUGUAY
Hotel Victoria Plaza

Reservations can be made at any of these hotels by cabling "Inhotelcor", or through our New York Office, or your own Travel Agent.

INTERCONTINENTAL HOTELS
Corporation
Chrysler Building, New York 17, N. Y.
Reservations Stillwell 6-5858

staffs of office furniture dealers in various parts of the country.

The Executive Furniture Guild has a membership of 50 or 60 dealers, all representing one manufacturer. The Certified Office Planning Service of the Wood Office Furniture Institute is subscribed to by a number of dealers who are not limited to a single manufacturer's products. All dealers equipped to do a complete decorating and designing job "make recommendations and suggestions without charge" in the hope of the prospect "eventually buying their equipment."

WALTER S. LENNARTSON
EDITOR, OFFICE APPLIANCES
CHICAGO, ILL.

Real Reason?

Dear Sir:

Your July 23, 1955 issue feature story, "A Dixie Industry Goes National" [p. 29] does not bring out the real reason for the Dixie furniture manufacturers' success.

The real reason is that with furniture's labor content of a sales dollar around 25% and with Dixie's over 30% lower labor rate than Northern and West Coast manufacturers, they naturally should enjoy a lead pipe cinch.

R. C. BOURDON
VICE PRESIDENT & TREASURER
B. P. JOHN FURNITURE CORP.
PORTLAND, ORE.

Salary the Solution

Dear Sir:

In your article about the uneven shortage of engineers, *Business Week* July 30, 1955, p. 126, I wish to point out that it is a matter of salary. Some engineers will work for low salaries such as research and aircraft companies pay, but others will not and training more will not solve the problem. I have known many engineers who have deserted the engineering field for other work, but they might be attracted back if salaries were better with steady employment.

ALDO MARCHETTI
LONG ISLAND CITY, N. Y.

Install It Right

Dear Sir:

We have read with great interest your article in the July 16, '55 issue of *BUSINESS WEEK* about the problems facing manufacturers of central air-conditioning units. We were particularly interested in the steps manufacturers are taking to educate their dealer organizations,

because [we] have been contributing to this educational program for several years.

As you pointed out in the article, cost of installation runs 2 or 3 times the cost of the equipment, and the manufacturer is highly dependent on the installer to use proper installation methods to get the business and to satisfy customers.

Since we brought out the first flexible lightweight glass fiber duct insulation 10 years ago, we too have a big stake in proper installation. For this reason, several years ago we produced a "How-to-Do-It" brochure . . . and more than 40,000 copies are now in use by heating contractors, sheet metal jobbers, air conditioning specialists, etc.

The need for dealer education is still tremendous because of the complex distribution patterns that have evolved in the industry.

Our sincere congratulations for your very lucid and interesting report on the problem.

R. P. MURPHY
GUSTIN-BACON MFG. CO.
KANSAS CITY, MO.

Dear Sir:

Your article on central systems for air conditioning [BW—Jul. 16 '55, p. 104] points out that "responsibility is borne by neither the manufacturer nor his franchised dealer" because of the inexperience of the builder.

In many areas this situation could be rectified by retention of independent consulting engineers to design the installation and prepare installation layouts for the guidance of the builder.

PAUL F. CUMMINGS
MINNEAPOLIS, MINN.

More Wings Flap

Dear Sir:

In reading your July 9, 1955 issue of *BUSINESS WEEK*, I was surprised to notice that your article entitled "Business Flaps Own Wings To Get Around" [p. 40] made no mention of the English built DeHavilland "Dove". It has been my experience that this twin engine airplane has become quite popular with a number of American industrial firms.

R. A. JOHNSON
CHICAGO, ILL.

Letters should be addressed to Readers Report Editor, *BUSINESS WEEK*, 330 West 42nd Street, New York 36, N. Y.

Q. Could chemical science find a way to increase the heat resistance of polyethylene for greater usefulness?

**A. ELECTRON BOMBARDMENT
GIVES POLYETHYLENE
AMAZING NEW PROPERTIES**

It's called radiation chemistry—this new G-E technique of bombarding plastics with high-energy electrons to create useful new properties.

For example, General Electric is applying it—for the first time—to make polyethylene film suitable for electrical insulation. G-E Irrathene® 201 irradiated polyethylene film has all the excellent insulating properties of conventional polyethylene, but it does

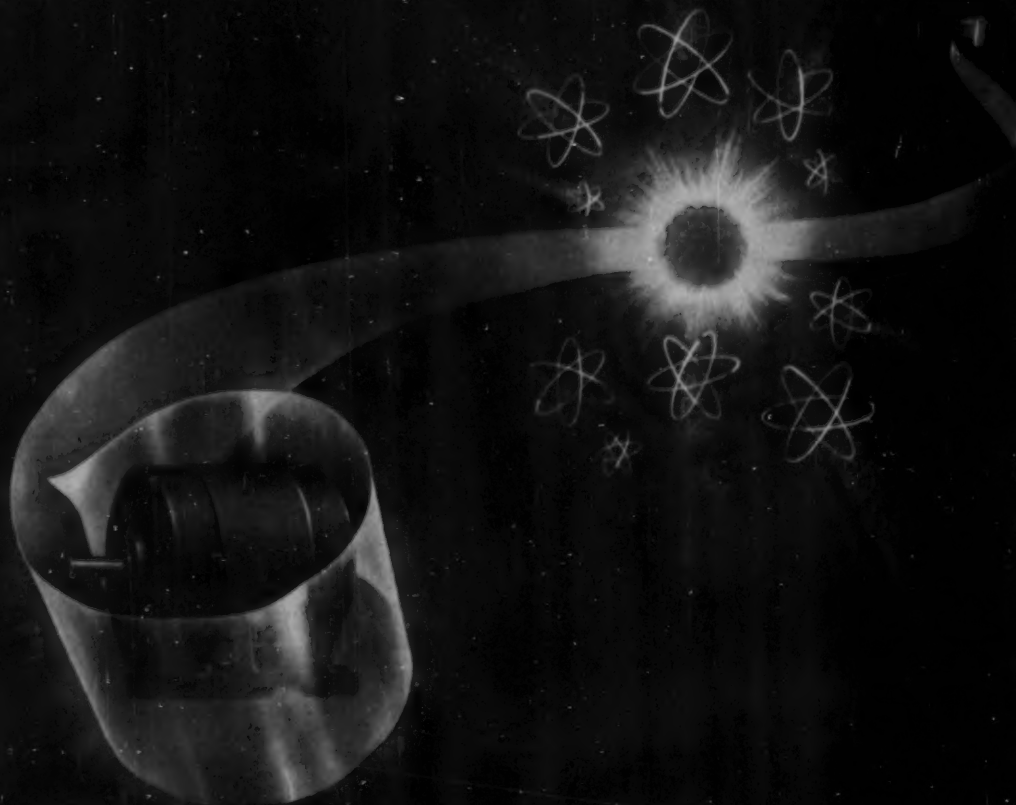
not melt at elevated temperatures. Irrathene holds tremendous promise for industry—not only in the electrical field, but for protective pipe-wrappings, hot-food packaging films . . . anywhere that heat-resistant polyethylene is useful.

You'll be hearing more about radiation chemistry from G.E. It's another example of progress for all-through G-E chemical progress.

Another example of



**CHEMICAL
PROGRESS**



For new developments in Plastics Compounds, Silicones, Electrical Insulating Materials, Industrial Resins and Varnishes, Plastics Laminating and Molding . . . write for "G-E Chemical Products" booklet (CDG-101) to: **CHEMICAL and METALLURGICAL DIVISION**, General Electric Company, Section 500-5A, Pittsfield, Mass.

Progress Is Our Most Important Product

GENERAL  ELECTRIC



▲ "Crazylegs" visits the 7th grade classroom of Miss Mary Fogarty (far right) at Wausau's Lincoln School. Mr. Hirsch, star of the movie "Crazylegs All-American" will soon appear in Hall Bartlett's production "Unchained."

"CRAZYLEGS" HIRSCH'S

Wausau Story

ELROY HIRSCH, All-American football great, visits his home town and tells this story

I CAN'T answer the old question of whether an athlete is born or made. But I do know that where you're raised counts for a lot, and I'm mighty glad that my home town was Wausau. I know that having lived in Wausau and gone to school there helped me get the most out of myself.

Recently I went back to Wausau and visited some of the people who had an important influence on me. Like Win Brockmeyer, football coach at Wausau High. Win has the great record of 123 victories and 9 losses. He's had a lot of offers to go into college coaching, but he stays in Wausau.

I visited my grade-school teacher, too, Miss Mary Fogarty, at Lincoln School. Her first question had nothing to do with football. It was, "Elroy, are you still a good boy?" That shows the kind of person she is and accounts for the really good influence she was on so many of us Wausau kids.

When I think of whatever success I've had, I go back to people like these. They're fine people. I'm not what you call a businessman, but I think I know why so many say that the Wausau kind of people are good people to do business with.



Coach Brockmeyer (top, right)...123 victories and 9 losses...a great record!

Employers Mutuals of Wausau are "good people to do business with."

Wausau, in the Chippewa tongue, means "faraway." Trains from Chicago get there in 9 hours. By plane it's 3 hours with the stop at Madison. Yet, Wausau, Wisconsin, is the home of one of the world's most important insurance companies.

Employers Mutuals started 43 years ago

when a group of lumbermen joined to pay claims of injured sawmill workers. We stayed in Wausau because something good had grown up there. A good way of doing business. A company "personality" that people liked and we didn't want to lose.

We're a large company today. We write all types of fire and casualty insurance and are one of the very largest in **workmen's compensation**. Whatever insurance you

might need, you will find this company has two outstanding reputations that can be of great benefit. One is unexcelled service on claims. The other is an exceptional field force, trained the Wausau way, with whom you deal *directly*.

There's a "little bit of Wausau" in 89 cities throughout the country—the cities where we have offices. In every one you'll find good people to do business with.

Employers Mutuals of Wausau



TESTS PROVE it pays to use coatings formulated with BAKELITE resins



"Uclon" Protective Coatings based on BAKELITE Vinyl Resins, used on this tank, are produced by **United Chromium, Incorporated**, New York 17, N. Y.

specified . . . because of proven performance

The case of Tank No. 82 is a typical one. A conventional coating failed. Rather than continue with costly short-lived maintenance, Colgate-Palmolive Company engineers undertook extensive testing of a wide variety of coatings.

Coatings based on BAKELITE Brand Vinyl Resins proved superior in these tests and, consequently, were applied to the tank structure shown in the photograph. That it will be a long time before further maintenance work is

needed has been shown by case histories over and over again.

Coatings based on BAKELITE Resins are tough, durable, and tenacious. They resist acids, alkalis, salt air and water, temperature extremes, and rough service. They provide longer wear on metal and masonry surfaces, and long-term economy that is superior. Our booklet, "BAKELITE Resin Coatings for Industry" shows interesting applications. Write to Dept. CQ-14.



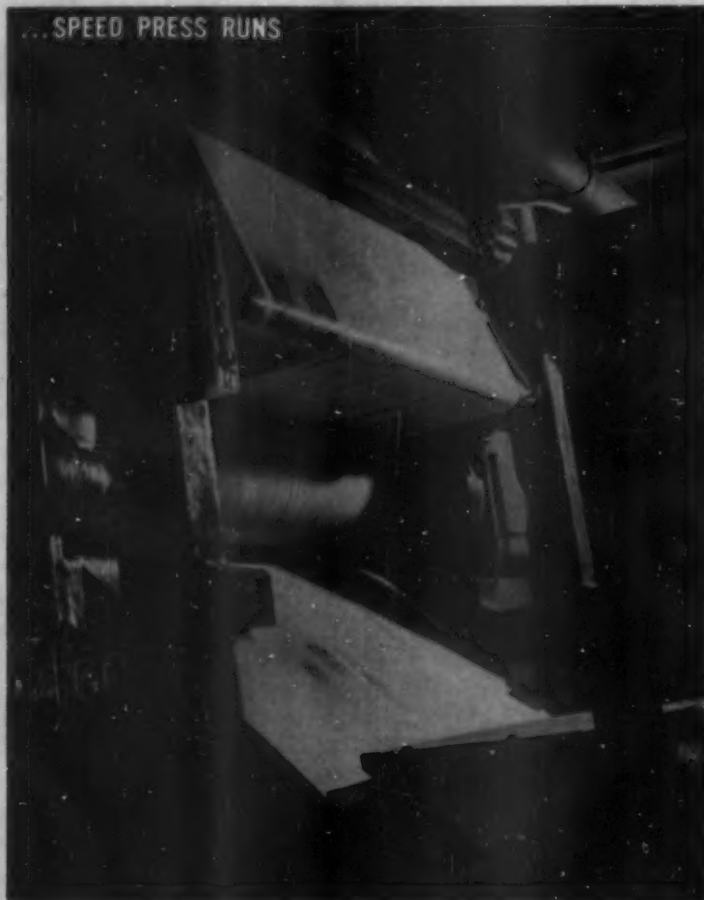
Vinyl, Phenolic, Epoxy, and Styrene Resins for Coatings

BAKELITE COMPANY, A Division of Union Carbide and Carbon Corporation **UCC** 30 East 42nd Street, New York 17, N. Y.
The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC

HOW HERCULES HELPS...



◆ **RECENT RESEARCH** shows that nonionic surface-active agents make earth soak up water more readily, hold on to it longer. Hercules nonionics, now being used for this purpose, may provide a key to better growth of lawns, flowers, gardens, and farm crops.



◆ **QUICK DRYING INKS** are as important as press speeds in getting large quantity printing jobs off on schedule. For every type of printing requirement—whether it be high speed or specialized—there's a Hercules resin or film-former to assist the ink maker in achieving the best possible formulation for the purpose.



◆ **AN INVITING POOL** takes more than water. As part of the regular maintenance program the sides of the pool must be painted with a protective coating that resists continual submergence. For such uses, and wherever coatings must withstand the challenge of water, acid or alkali, paints based on Hercules Parlon® (chlorinated rubber) give longer service at lower long-term cost.

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SYNTHETIC RESINS, CELLULOSE PRODUCTS, CHEMICAL COTTON, TERPENE CHEMICALS, ROSIN AND ROSIN DERIVATIVES, CHLORINATED PRODUCTS, OXYCHEMICALS, EXPLOSIVES, AND OTHER CHEMICAL PROCESSING MATERIALS.



000-9

BUSINESS OUTLOOK

BUSINESS WEEK
AUG. 13, 1955



Inventory scrambling gives today's economy a lopsided spin.

Orders are outpacing distribution. This, of course, spurs production. It also provides extra jobs and bolsters payrolls.

But it holds no promise for the future—rather a threat.

Inventory figures, such as they are, seem to indicate accumulation of stocks at an annual rate of \$5-billion in the second quarter.

Fortunately for peace of mind, much of this has been at the retail level. Some represents restocking of bare shelves. Some has attempted to beat price increases. But the biggest share is in new cars held by dealers—cars that salesmen believe they'll move soon.

Nevertheless, stocking by factories is at a \$2-billion yearly rate.

Most manufacturers probably won't agree that they've been able to build inventories even to a comfortable level.

Certainly it is true that factory inventories, over-all, are no larger than a year ago. At the same time, manufacturers are shipping 10% more goods than at this time last year while new orders are up 20%.

It must be remembered, though, that much of the ordering and some of the shipments represent goods going into someone else's inventory.

Inventory buying is as much "a bubble on the boom" as is too much credit. But don't get the idea that everything is froth.

The drive to build and balance inventories will continue for some time. And, when a change does come, it's more likely to be in the nature of a tapering off than it is a turnaround.

Any new "inventory recession" is still a long way off.



Helter skelter buying of metals might be amusing if it were not (1) frustrating to the have-nots, and (2) dangerous in the long run.

On all sides you see steel companies paring down the orders they accept. Iron Age declares this week that old customers are feeling the knife right along with new ones.

And, in copper, thanks mainly to strikes, things are even worse.

Steel users suffer from the fact that mill operations are falling below planned output, week by week. This is due to vacations, hot weather, and necessary letdowns for repairs.

But, meanwhile, the level of demand isn't so high as it looks.

We have entered a period when purchasing agents pad their needs. And they doubtless, too, are placing some duplicate orders. These steps could be the forerunners of a new gray market.

Copper's woes won't be ended by a price rise to 40¢ a lb.—or even to levels around 50¢ prevailing in the "premium" market.

Sometimes freeing a price equates demand with supply—simply by hoisting a material out of some users' reach. But world need for copper

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
AUG. 13, 1955

now is so great, and supply so short, that no such solution seems likely. Uninterrupted output for several months appears more to the point.

Chile isn't ready to solve our copper problem for us. The big South American producer proposes to allot the U.S. only 30% of its output as long as London is paying so much more than New York.

More aluminum than any nation ever produced before (not to mention imports from Canada) just doesn't seem to be enough.

For some time, the industry has been turning out metal at a rate of better than 1½-million tons a year (page 32). By way of comparison, this is nearly 10 times the level of prewar 1939, and about double the actual output either at the wartime peak or as recently as 1950.

Zinc enjoys one of the quieter markets among the major metals, but even here conditions are hardly easy.

Demand was lower in July, mainly due to vacations in the metal-using industries. Yet stocks in the hands of refiners rose only slightly and are equal to about two-thirds of an average month's needs.

It might be noted, too, that zinc is doing quite nicely despite steadily declining takings for Uncle Sam's stockpile this year. (July stockpiling was the smallest for 13 months.)

—•—

Largest employment ever, the smallest number of unemployed since the government changed its method of counting early in 1954, and a shrinking handful of areas with labor surpluses . . .

These are some of the notable accompaniments of the boom.

Nearly 2-million more people are working now than a year ago, accounting for July's record employment of virtually 65-million.

This has absorbed growth in the labor force (a greater than normal expansion, due to subnormal growth in last year's poor job market) plus a net release of nearly 400,000 from the armed forces.

At the same time, unemployment has been cut 800,000 in a year. The jobless total now stands at slightly less than 2½-million.

Manufacturing employment, typically, lagged the recovery. But its contribution is becoming impressive now.

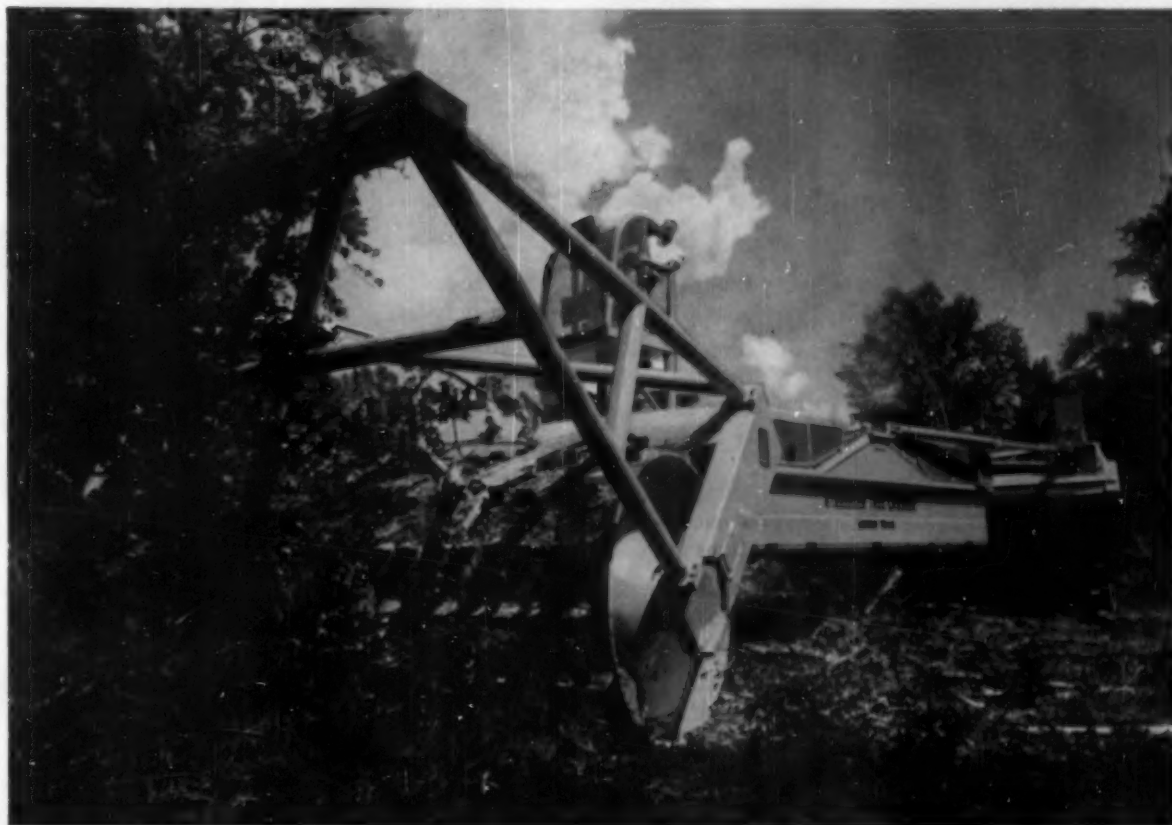
Nearly a million more are at work in factories than a year ago.

Nevertheless, the total still is 800,000 below 1953's peak.

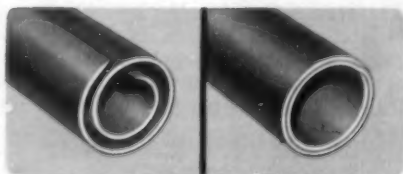
July usually sees a reduction in the number of hours workers put in on the job, and this year was no exception.

The average work week last month was about half an hour shorter than in June. Thus, despite a slight rise in hourly pay, the typical factory worker earned \$75.76, 35¢ a week less than the month before.

Spectacular, new "tree crusher," one of a new breed of monster land-clearing machines recently developed. Rolls up to trees, bowls them over like tenpins, roots and all. Designed and manufactured by R. G. Le Tourneau Co., Longview, Texas. Uses Bundyweld for fuel, cooling, lubrication, and gauge lines.



Mighty mechanical Paul Bunyan relies on lifelines of Bundy Tubing



Bundyweld is the only tubing double-walled from a single steel strip, copper-bonded through 360° of wall contact. Its unique structure makes it amazingly strong and highly versatile.

Bundyweld is uniformly smooth, inside and out; is resistant to pressure and vibration fatigue. Lightweight, it has high burst strength, can be fabricated easily, bends to shortest radii.

HEAVY-DUTY EQUIPMENT, like this monster tree leveler, naturally requires strong, reliable component parts. For ultra-dependable "lifelines"—oil, fuel, brake, hydraulic—leading manufacturers specify Bundyweld Steel Tubing.

Made by an exclusive process (see left), Bundyweld has become the accepted standard for the automotive and refrigeration industries. In fact, it is used in 95% of today's cars, in an average of 20 applications each!

Industrial designers around the world look first to Bundy for the finest in tubing plus specialized engineering assistance. New uses are found almost daily, in both fluid transmission and purely mechanical applications—wherever high strength, flexibility, lightness, and cost savings are important. Call, write, or wire today!

There's no real substitute for Bundyweld Tubing
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DETROIT 14, MICHIGAN

WORLD'S LEADING PRODUCER OF SMALL-DIAMETER TUBING. AFFILIATED PLANTS IN AUSTRALIA, ENGLAND, FRANCE, ITALY, AND GERMANY



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Clean as can be!

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Clearly, the cases are Kodapak Sheet... tough, durable, crystal-clear, color-true, free from waves and ripples. Customers see the product clearly, buy without handling!

Clearly, the cases are Kodapak Sheet... uniform in composition and gauge, with good dimensional and chemical stability. It draws without "blush," is processed in

high-production machinery. Packaging costs are kept in line!

Give you ideas for your product line? Then call our representative, or write for full information—literature, names of firms using Kodapak Sheet or handling it.

**Cellulose Products Division,
Eastman Kodak Company, Rochester 4, N.Y.**

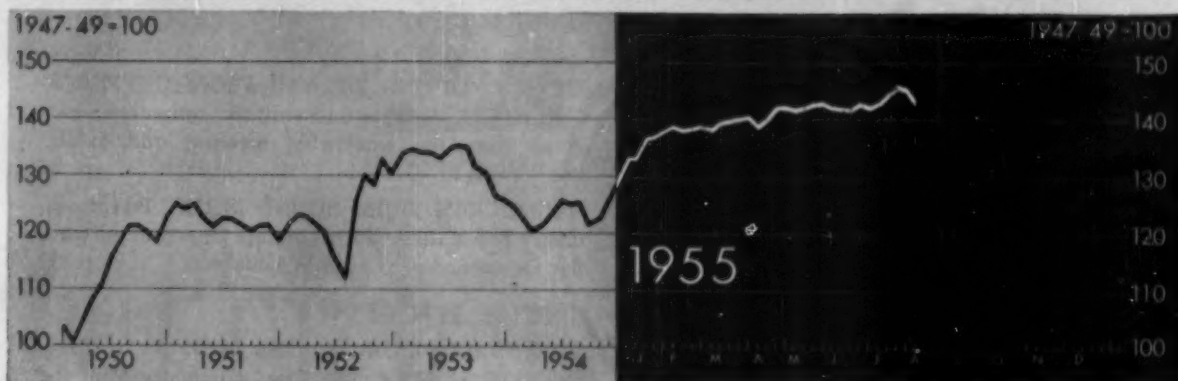
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Sales offices: New York, Chicago, Atlanta. Sales representatives: Cleveland, Philadelphia, Providence. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.); Toronto, Montreal (Paper Sales Ltd.).

FIGURES OF THE WEEK



Business Week Index (above)

PRODUCTION

| | \$ Latest Week | Preceding Week | Month Ago | Year Ago | 1946 Average |
|--|----------------|----------------|-----------|----------|--------------|
| Steel ingot production (thousands of tons)..... | 2,192 | †2,098 | 2,202 | 1,525 | 1,281 |
| Production of automobiles and trucks..... | 172,139 | †199,788 | 167,288 | 124,168 | 62,880 |
| Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).... | \$57,461 | \$67,625 | \$78,628 | \$54,558 | \$17,083 |
| Electric power output (millions of kilowatt-hours)..... | 10,925 | 10,727 | 9,759 | 9,059 | 4,238 |
| Crude oil and condensate production (daily av., thousands of bbls.)..... | 6,640 | 6,616 | 6,597 | 6,153 | 4,751 |
| Bituminous coal production (daily average, thousands of tons)..... | 1,602 | †1,582 | 1,723 | 1,253 | 1,745 |
| Paperboard production (tons)..... | 278,376 | 280,062 | 155,704 | 245,341 | 167,269 |

TRADE

| | | | | | |
|--|------|------|-----|-----|------|
| Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars)..... | 73 | 73 | 75 | 66 | 82 |
| Carloadings: raw materials (daily av., thousands of cars)..... | 59 | 59 | 50 | 48 | 53 |
| Department store sales (change from same week of preceding year)..... | +13% | +12% | +5% | +1% | +30% |
| Business failures (Dun & Bradstreet, number)..... | 213 | 201 | 204 | 207 | 22 |

PRICES

| | | | | | |
|--|---------|---------|---------|---------|----------|
| Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)..... | 404.2 | 403.1 | 405.3 | 429.7 | 311.9 |
| Industrial raw materials, daily index (U. S. Dept. of Labor BLS, 1947-49 = 100)..... | 97.6 | 97.0 | 94.9 | 85.6 | †173.2 |
| Foodstuffs, daily index (U. S. Dept. of Labor BLS, 1947-49 = 100)..... | 80.3 | 81.1 | 85.5 | 99.2 | †175.4 |
| Print cloth (spot and nearby, yd.)..... | 19.0¢ | 19.0¢ | 19.0¢ | 18.9¢ | 17.5¢ |
| Finished steel, index (U. S. Dept. of Labor BLS, 1947-49 = 100)..... | 153.9 | 153.9 | 144.9 | 144.5 | †176.4 |
| Scrap steel composite (Iron Age, ton)..... | \$44.00 | \$43.33 | \$38.50 | \$27.83 | \$20.27 |
| Copper (electrolytic, Connecticut Valley, E&M), lb.)..... | 36.000¢ | 36.000¢ | 36.000¢ | 30.000¢ | 14.045¢ |
| Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)..... | \$2.28 | \$2.17 | \$2.14 | \$2.36 | \$1.97 |
| Cotton, daily price (middling, 14 designated markets, lb.)..... | 33.53¢ | 33.72¢ | 33.86¢ | 34.12¢ | **30.56¢ |
| Wool tops (Boston, lb.)..... | \$1.78 | †\$1.80 | \$1.85 | \$2.24 | \$1.51 |

FINANCE

| | | | | | |
|--|--------|--------|-------|-------|-------|
| 90 stocks, price index (Standard & Poor's)..... | 334.9 | †343.2 | 338.3 | 242.0 | 135.7 |
| Medium grade corporate bond yield (Baa issues, Moody's)..... | 3.55% | 3.54% | 3.51% | 3.50% | 3.05% |
| Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)..... | 2½-2½% | 2½-2½% | 2-2½% | 1½% | ½-1% |

BANKING (Millions of dollars)

| | | | | | |
|--|--------|--------|--------|--------|----------|
| Demand deposits adjusted, reporting member banks..... | 55,865 | 56,416 | 55,336 | 54,217 | †145,820 |
| Total loans and investments, reporting member banks..... | 84,878 | 84,914 | 84,095 | 82,850 | †171,916 |
| Commercial and agricultural loans, reporting member banks..... | 23,550 | 23,526 | 23,326 | 20,770 | †19,299 |
| U. S. gov't guaranteed obligations held, reporting member banks..... | 31,975 | 32,161 | 31,797 | 36,605 | †149,879 |
| Total federal reserve credit outstanding..... | 25,638 | 25,506 | 25,265 | 25,154 | 23,883 |

MONTHLY FIGURES OF THE WEEK

| | Latest Month | Preceding Month | Year Ago | 1946 Average |
|---|--------------|-----------------|----------|--------------|
| Employment (in millions)..... July..... | 65.0 | 64.0 | 62.1 | 55.2 |
| Unemployment (in millions)..... July..... | 2.5 | 2.7 | 3.3 | 2.3 |
| Wholesale prices (U. S. BLS, 1947-49 = 100)..... July..... | 110.5 | 110.3 | 110.4 | 78.7 |
| Personal income (seasonally adjusted, in billions)..... June..... | \$301.2 | \$301.4 | \$286.7 | \$178.0 |
| Farm income (seasonally adjusted, in billions)..... June..... | \$14.4 | \$14.8 | \$16.0 | \$16.9 |
| Retail sales (seasonally adjusted, in millions)..... June..... | \$15,345 | \$15,368 | \$14,439 | \$8,541 |
| Exports (in millions)..... June..... | \$1,315 | \$1,308 | \$1,474 | \$812 |

° Preliminary, week ended August 6, 1955.
† Revised.

†† Estimate.
** Ten designated markets.

§ Data for "Latest Week" on each series on request.

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BUT CAN THE DEALERS SELL 'EM? Detroit is pouring out autos at a record pace. So far, sales have held up well, but there are danger signs....p. 25

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MILLIONS MORE IN RANKS. Labor chiefs assume that joint AFL-CIO will soon be larger than the sum of its parts.....p. 110

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RESEARCH:

GANGING UP ON MISSILES. Three companies in the missile field are putting their best brains together to solve tough problemsp. 130

IN FACTORY SCHEDULING, DESIGN AND PRODUCTION

... refining sugar



or petroleum

... making paper products



or autos—

if you're in plastics or steel



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...in a range of
sizes and prices
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figuring needs

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*is your
precision tool
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More businesses of every kind, every day, mechanize their figuring with the fully automatic Friden Calculator—for this reason: The Friden performs more steps in figure-work *without operator decisions* than any other calculating machine ever developed. Operator decisions (thinking plus motions) take time—much of which is saved by Friden figure-thinking. Time-savings on payroll, invoices, discounts, cost control, inventory—all business calculations—amortize quickly the cost of this machine. And operation is no problem: So *automatic* is the Friden that anyone can use it with the simplest instructions.

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PRODUCTS OF FRIDEN

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THE NATURAL WAY ADDING MACHINE
THE COMPUTYPER
THE ADD-PUNCH MACHINE



Benjamin, Oscar and Ralph Lazrus, brothers who head the Benrus Watch Company, ask . . .

"Have you seen the Benrus torpedo?"

"Within its perforated shell, three of our self-winding waterproof watches were towed from Gibraltar to New York, submerged in the turbulent wake of a fast trans-Atlantic liner. When the torpedo was opened — every watch was on time to the tick!

"Then came the job of delivering 56,000 more of those same Benrus watches to jewelers all over the country, before the nationwide TV promotion date.

"We called Air Express—and every watch arrived on time.

"We depend on Air Express. They handled over 11,000 shipments for us last year. Not one was lost, late or damaged.

"Yet Air Express usually costs us less than would any other complete air service. 15 lbs., for instance, from New York to Atlanta, Ga., is \$5.63. That's the lowest rate in the field by \$1.27. Add it up on several thousand shipments!"



Air Express



GETS THERE FIRST via U.S. Scheduled Airlines

CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY



But Can the Dealers Sell 'Em?

The auto industry has broken all production records for July and for the first seven months of any year. Now it's going after another five big months that can put 1955 far ahead of any other year.

In January through July, the auto makers turned out 4.9-million cars. July alone accounted for 660,000 units (compared with 442,000 a year ago). And the pace isn't slackening. Detroit is still pouring new cars on the dealers.

• **Backbreaker**—Production schedules call for 1.6-million cars in August through October, and the trade expects more than 1-million in November-December. So it looks like about 7.7-million cars for the year. Detroit is counting on the dealers to sell maybe 7.2-million.

In 1950—often cited as the golden year both for manufacturers and for dealers—the industry produced 6.6-million cars and the dealers sold 6.3-million. Thus, Detroit's pace for factories and dealers in 1955 runs about 1-million ahead of the best year the industry ever had.

Under this kind of pressure the deal-

ers are beginning to groan. Their newspaper ads and show windows (picture) have a distress-sale look, more like the 1953-54 slump than the bustling days of 1950.

I. View From Detroit

If the dealers are distressed today, however, it comes from high output of cars, not from slow buying by the public. It traces back to the prevailing industry philosophy: "Sell today while the selling is good—worry about next year next year."

Detroit had the idea that, with the economy at a peak over-all, now is the time to sell cars. That's why the industry has kept the heat on the dealers. July figures show how well the tactic has worked. Dealers sold about 624,000 cars, a rate unheard of for midsummer.

With the market holding up like that, industry analysts jacked their estimates of a couple of months ago (BW-Jul. 2 '55, p25). In the new light of July, they see no disaster in month-end dealer inventories of about 715,000 cars (up from 357,000 last Jan. 1).

They expect inventories to be cut to about 622,000 cars by Nov. 1.

• **How?**—Here's how that inventory figure could be reached. According to best estimates, the industry plans to produce 595,000 cars in August, 447,000 in September, 515,000 in October. The sales goal is 630,000 cars in August, 520,000 in September, 500,000 in October. Net: a cut of 93,000 cars from dealers' stocks.

In any other year, a Nov. 1 inventory of 622,000 cars would be frightening. Some Detroiters are, in fact, uneasy about it, but the majority say this year's sales pace makes all previous benchmarks meaningless.

II. As Dealers See It

There are signs that the dealers, in the front-line trenches in this fray, aren't taking the situation so calmly. You can read desperation into some of their sales pitches: no down payment, 48 months to pay; all-expense trips to Hawaii, Paris, or Florida with all new cars; big discounts, lavish over-allowances on trade-ins.

Just before Congress adjourned, a

Senate Interstate Commerce subcommittee voiced concern over the record number of unsold cars and over reports that dealer failures have tripled since 1951.

People are worried, too, about the lengths to which dealers and credit men will go to keep cars moving out of the showrooms. A meeting of finance company and Federal Reserve Board officials in Washington on Tuesday underlined the need for tighter credit terms (page 120).

• **Majority Opinion**—Nevertheless, dealers in most parts of the country shrug at their selling problem. Most say stocks are high but can be worked off if sales stay at the present gait of well over 20,000 cars a day. According to a survey by Automotive News last week, dealer profits are better than last year in most areas. Notable exceptions are Dallas and New York.

• **New York Slump**—Leading New York dealers told BUSINESS WEEK that their slump looks more serious every day.

One man said this week that July and the first week of August had fallen 50% below May-June levels—for all brands. He expects cars soon to pile up badly.

"Any dealer can theoretically refuse to accept more cars, of course," he said, "but as a practical matter, they won't."

A big Chevrolet dealer said sales are running 10% below a year ago, when business was relatively poor with many people waiting for new models. A Buick dealer, however, said current sales are only 10% below May-June, and a Chrysler-Plymouth dealer also said sales show only a normal summer dip, possibly accentuated by a month of abnormal heat. This dealer expects a rush of bargain-hunters shortly, but he says that car prices can't be cut further.

Whatever the total sales loss in New York's auto market, it runs contrary to department store sales, which rose 7% above July, 1954.

• **Saving Factor**—For the country's auto dealers as a group, however, the year looks bright. A survey by the National Automobile Dealers Assn. shows that better management and greater volume have improved the profits picture, at least for the first quarter this year.

According to the survey, the average gross profit per new car last year was \$691; for the first quarter this year it was \$702. Fixed expense last year was \$487 per car; this year, \$393.

This effect of increased volume is one reason for the extravagant offers so many dealers are making. The dealers have learned to profit while they run cars through their showrooms at a dizzy clip—which is just what the factories expect them to do.

Moreover, the factories indirectly pick up the tab for many of the price concessions, through incentive deals and bonuses for exceeding quotas. A survey recently revealed that every maker except Cadillac has offered its dealers some kind of incentive for extra sales this year.

• **Easy Terms**—Much of the breakneck sales pace comes from the ease of credit, the financiers will tell you. But the auto people put it the other way: The rise of credit comes from the rise in auto sales.

Either way, auto paper has increased 24% in the past year, with a rise of \$2.4-billion to a new record of \$12.5-billion on June 30 (BW-Aug. 6'55, p50).

A spokesman for a leading auto finance company says that this year's credit pattern is no different from that of years past. About 75% or 80% of new cars are now being sold on time, but the ratio always rises that high in summer, he says. The cash buyers get their cars early in the year; the people who buy now are those who thought they couldn't afford a new car last winter and who are suddenly lured by lush offers of the dealers. By yearend, he says, the number of cars that are bought on time often exceeds 90%.

• **Potential Trouble**—The chief worry over credit is hung on the quality, not the quantity, of the loans. It stems from the "no money down" and the "48 months to pay" type of loan.

Manufacturers and the National Automobile Dealers Assn. have been working quietly to discourage this kind of financing, more as a potential than a present danger. Despite the free-wheeling credit available in some parts of the country, the average auto loan is still a shade below 30 months and one of the largest finance companies says it gets about one-third down. The repossession rate is so low no one even bothers to figure it.

The dealer association and the big credit companies warn that a long repayment period (1) takes the buyer out of the market for a long time and (2) lets the car's value depreciate faster than the unpaid balance, opening the way to a climb in repossessions.

• **Can't Always Control**—Despite NADA's campaign, backed up by warnings from manufacturers and the big auto credit companies, the dealers often go their own way.

Their stake in easy credit is plain to see. It's easier to sell cars when people can be given long-term credit. Dealers need big volume to make profits these days. And, finally, a dealer gets a commission for arranging financing (although the charge is not so labeled).

Europe's

BRITAIN:

With inflation at home, it lost \$136-million from its gold reserves in July.

BELGIUM:

Threat of inflation coming mainly from outside pressures, leads to higher bank rate.

FRANCE:

Economy is growing but sluggish—seems to run by its own rules; recession may be as big a chance as inflation.

Will the

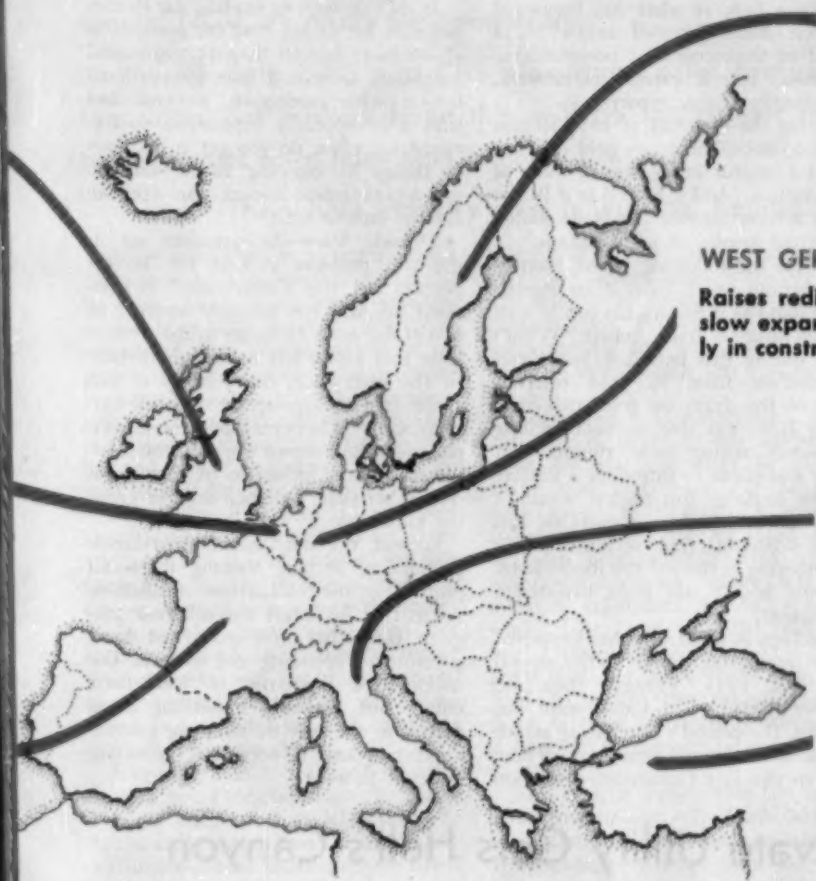
All the Western world, like the U.S., is discovering that prosperity can get out of hand.

In almost every one of the tier of countries that make up Western Europe (map), governments are struggling with some version of the same problem. Three years of steady growth and generally stable prices have built up a boom in production and consumption. And now the boom is showing signs of inflationary fever.

For Western European countries, especially Britain, inflation is something to be dreaded even more than it is in the U.S. It means red ink in foreign trade accounts, a drain on gold reserves, a drag back toward the chaotic postwar situation.

• **Applying the Brakes**—Europeans, however, hope to head off this new inflation threat with less desperate measures than some they have used in the

Prosperity Raises Inflation Threats...



SWEDEN:

A tight money policy, introduced early this year, is keeping inflation in check.

WEST GERMANY:

Raises rediscount rate to slow expansion, especially in construction.

ITALY:

May follow trend toward higher bank rates, but that won't check inflationary pressure, as economic development of South speeds up.

TURKEY:

With no monetary discipline, inflation has got out of hand. Soon it may force devaluation of the Turkish pound.

Credit Medicine Be Enough?

past. To check the boom, government money managers across the Atlantic have been putting on the credit brakes, just as U.S. authorities have (BW—Aug. 6 '55, p. 25).

Last week the West German and Belgian central banks raised their rediscount rates. And the week before Britain's Chancellor Butler took another turn in the credit screw he started applying late in the winter.

Other European countries may have to follow suit whether they like it or not. Money markets have become so closely interrelated in the past two or three years that countries like the Netherlands and Italy, even if less threatened by inflation, can't afford to keep their interest rates down when others are rising. They would then face a drain on short-term international funds.

• **Encouraging Signs**—Economists here

and in Western Europe are encouraged by the way the European governments are applying modern stabilization techniques—intervention during prosperity to restrain demand and forestall the danger of a bust. They are delighted that so far there has been no recourse to the kind of physical controls that Britain's Labor government used so unsuccessfully in trying to check inflation. Some of them even feel the present monetary technique is superior to the classic gold standard, when central bank action usually came at a later stage in a boom and required a more severe deflation.

But it is too early for much of this kind of optimism. Only two months ago the Bank for International Settlements, the closest thing Western Europe has to a central bank for the whole area, gave what now looks like too rosy a verdict on Europe's economy. At that

time, in June, the BIS confidently believed "the inflationary phase of postwar economic development" had "come to an end."

U.S. government economists who keep a close eye on European developments agree that there has been real progress toward stability. But they don't agree that Europe's postwar adjustment is anywhere near as complete as ours—or at least not in several important countries. And they aren't sure that monetary policy alone, except perhaps in Germany, will remove the threat of inflation. They think that government expenditures for the welfare state need to be cut. From Scandinavia down through West Germany and France to Italy they foresee continued problems. And they definitely have their fingers crossed on Britain.

• **Inflationary Factors**—A roundup of Europe shows some problems that are

pretty general and some that are special to individual countries.

Three recent developments, in particular, seem to have led continental monetary authorities to tighten up on credit:

- Prices of some raw materials, including most metals, have been rising. This apparently has been a big factor in West Germany.

- In nearly every country, the construction boom has reached unexpected levels, often absorbing labor that could be used in export industries.

- Labor shortages have brought on real bottlenecks. The result has been a kind of black market in wages in West Germany somewhat similar to that in Britain. British employers are offering bonuses, free meals, and bus rides up to 20 and 30 miles.

- **West Germany's Outlook**—Observers give West Germany the best chance of meeting these problems and others without succumbing to inflation or running into balance of payments difficulties. During the past three years retail prices have actually fallen in West Germany. In contrast, they have risen substantially in Britain. One of the main reasons for German price stability is that productivity has been rising faster than wages. Meanwhile Bonn's gold and dollar reserves have been rising steadily.

There are two things that might darken this picture: (1) the diversion of resources to rearmaments; and (2) an aggressive drive by German workers for big wage boosts. But as things look now, German industry should be able to keep productivity rising at a faster rate than wage costs.

- **France and Italy**—To outsiders, if not to the French, the course of France's economy is unpredictable. After two years of steady industrial expansion, it now looks as if production might slow down and that France may be facing recession rather than inflation. According to ex-Premier Mendes-France, that's because both private and government investment have been too low.

But two things are reasonably clear about France: (1) It is steadily losing ground in the technological race; and (2) it is more sheltered from outside competition by import restrictions and export quotas, than any other country in Europe.

Italy was one of the first European countries to impose a strict monetary discipline on its economy. That explains in large measure why the industrial North has had such a rapid resurgence. But now it looks as if the political pendulum has swung a little left of center and that social objectives are going to get the priority. Without more outside help than can be expected, the proposed plan to develop the South industrially is sure to involve inflationary financing.

- **Britain's Problem**—The British problem—more immediately critical than any other—is as simple or as complicated as you want to make it. But you can't get away from a few fundamental facts.

Take a look at what has happened between mid-1954 and mid-1955, a period of unprecedented personal consumption, record capital investment, and steadily rising imports.

During the first half of 1954 Britain added \$500-million to its gold reserves. It had a surplus in its over-all trade of £172-million. And it looked as if Butler might achieve one of his main goals—an annual surplus of £300-million.

But for the following twelve months imports rose much more than exports and it looks as if Britain has run at least a small over-all trade deficit. What's more, during this period it lost about \$500-million from its gold reserves. Some of the drain on gold, especially during July, was due to short selling of pounds arising from rumors that Butler was about to introduce a flexible rate for sterling. But traders wouldn't have been selling their pounds, on this rumor, if Britain's trade accounts hadn't been running in the red and its domestic economy hadn't still been threatened by inflation.

Also keep in mind what has happened to the purchasing power of the pound since July, 1945. Between then and October, 1951, when Labor went out of office, the pound's purchasing power fell by an estimated one-third. Then, between the first Conservative election

victory and the one this May, it has fallen by another 8%. This shows some success for Conservative policy, but certainly not enough to allow for any jubilation.

It isn't enough to explain the British problem by saying that its position is always more delicate than its continental neighbors' because it is an international banker with inadequate reserves and that it is especially dependent on foreign trade. Nor do you get at the root of things by blaming Butler for too soft a pre-election budget. (In April he cut the income tax.)

- **Outside View**—As outsiders see it, the real problem is that the British people and the Conservative government are still too strongly wedded to two of the main elements in the welfare state that Labor left behind in Britain. In the first place, the country is still committed to a policy of over-full employment. Whenever spots of unemployment have shown up, even the Conservatives have moved in to wipe them out rather than let labor shift to growing industries.

Second, the state is the most lavish spender in Britain, making it, in all probability, the chief artisan of inflation. As part of his latest anti-inflation program, Butler has promised to cut down government spending and to force the nationalized industries to trim their sails. But probably something more drastic in the way of reducing government programs is needed if monetary policy is to work.

Private Utility Gets Hell's Canyon

The Federal Power Commission last week voted to license Idaho Power Co. to develop the hydroelectric potential of the 37-mile Hell's Canyon stretch of the Snake River (BW-Dec.4'54, p32).

The FPC decision was a monumental victory for private power, a staggering defeat for public power forces that had made some progress in the session of Congress just ended.

It came as the climax to a three-year nationwide political debate as to whether the Idaho utility or the federal government should develop this deep gorge along the Snake, one of the last great undeveloped hydro sites in the country.

Under the Democrats, the Army Corps of Engineers proposed a single high dam at the Hell's Canyon site.

Under the license, Idaho Power will build three smaller dams—Brownlee, Oxbow, and Low Hell's Canyon.

The utility will impound only 1-million acre-feet, put out less power than the high Hell's Canyon dam. FPC said the added power from the high dam would not have so favorable

a cost-power output ratio as the company's series.

- **Off Guard**—The FPC decision caught Congressional Democrats off guard. It was made on July 27, before Congress adjourned, but announcement was withheld until after adjournment. Democrats were congratulating themselves on beating Pres. Eisenhower's policy for large-scale private-federal partnership development of the nation's remaining water resources. They had beaten the Administration's Dixon-Yates plan; indeed, Democrats rammed other federal power projects down the Budget Bureau's throat and had refused Republican requests for partnership dams.

The Hell's Canyon case will now go to court. The National Hell's Canyon Assn. has promised a fight to the finish. Democrats in Congress will try to nullify FPC's ruling. This year, two subcommittees in Congress voted for the high-dam plan, and public power Democrats will try to push it from there. But it will be an uphill fight. Power spokesmen say the courts almost uniformly have backed the decision of quasi-judicial agencies such as FPC.

Color TV: On the Way at Last?

● Its history to date has been a series of disappointments. Now, it's ready for another try.

● Both NBC and CBS plan more color programs this year. Set makers hope this will be the trigger that, finally, starts color television moving.

● The whole industry now is waiting, hoping.

Color television, as a technological development, is undeniably a success. It works. Most of the major troubles it was born with have by now been engineered out. According to a reporter who went with cynical predisposition to watch a color broadcast, followed by a black-and-white rebroadcast for comparison, the latter seemed flat and dull. "You almost wanted to turn away," he said later.

This makes it doubly sad and puzzling to the industry that, so far, color TV as a commercial venture has not worked at all. The Federal Communications Commission approved the industry's color broadcasting standards in December of 1953, thereby telling TV networks and set makers to go ahead and sell. It is now more than a year and a half later, and color sets still gather dust on shelves.

Now, the industry is ready to make another try. Predictions are that color TV will finally start to sell either late this year or some time in 1956.

• **Hurdles**—These predictions are based largely on the theory that there have been three tall hurdles between color TV and its pot of gold, and that the last of them has been or will soon be removed:

Picture size. Early color television sets had picture tubes measuring 15 in. and less diagonally across the face. This was too small for consumers used to a yard's worth of black and white. Now, several manufacturers have 19-in. and 21-in. color sets to offer, and there are rumors in the trade of even greater expanses of picture soon to be announced.

Price. Early color sets cost \$1,000 and more. This was enough to dampen thoroughly the average consumer's enthusiasm, for it was as much as he would pay for an excellent late-model used car. Today, color prices have drifted down to about a \$700 minimum, and it is to be expected that further developments in and behind the production lines will lower prices more as time goes on. What's more, men in the marketing end of television point out, when the color TV market grows bigger and matures

there will be discounts and special sales and second-hand sets. All this will bring color to a broader range of income levels. For comparison, black-and-white TV sets now cost \$150 and up new; rebuilt used sets can be had for \$25.

Programming. Manufacturers point out that in order to sell anybody a color TV set, you must be able to assure him that there will be some color shows to look at. A generally accepted measure sets 12 to 15 hours of color programming a week as the minimum necessary before sets will move to consumers. So far, the networks have not provided anything like a steady 12 to 15 hours. They point out, for their part, that it is hard to justify the magnificent expense of color broadcasting when only a handful of consumers will be able to watch.

But now, it seems, this last hurdle is starting to give way. Both National Broadcasting Co. and Columbia Broadcasting System plan large increases in color programming this year (BW—Aug. 6 '55, p60). Both hope that this will spur set sales, enlarge the programs' audiences, make it worthwhile to continue the programs and perhaps add more, and—coming full circle—spur set sales further.

• **Chances**—What are the odds that this joyous spiral will actually materialize? Very good, men in the business say—though some envision a much slower start than others. This is the first time in color TV's short unhappy commercial history, the trade believes, when conditions have been such as to let such a spiral gain momentum.

Previous attempts to trigger the spiral have battled with unfavorable conditions. Early in 1954, for instance, set manufacturers launched a heroic effort. Radio Corp. of America, Westinghouse Electric Corp., Motorola, Inc., and CBS-Columbia, Inc., leaped into the market with grim determination. There was talk of selling 100,000 sets during 1954. But prices were high, and programming was thin. Too, black-and-white television was selling so well that many dealers

failed to promote color with any real enthusiasm. The 1954 record: Perhaps 20,000 sets were produced.

This year, conditions are more ripe. There will be more programs, lower prices, improved sets. And according to the University of Michigan's Survey Research Center, demand for black-and-white television may fall off soon (BW—Aug. 6 '55, p42).

• **Watch, Wait**—The manufacturers, however, are proceeding with great caution. Most of them are concentrating their efforts now not on selling color TV but on perfecting it in the laboratory. Westinghouse is not manufacturing color at all right now. CBS-Columbia has color sets waiting, a merchandising program designed, an entire campaign poised for the day when demand materializes. Philco Corp., Allen B. Du Mont Laboratories, and others that moved carefully in 1954 are still moving carefully now.

There is a noticeable lack of the kind of rampant optimism that was present in the winter of last year. Back then, it seemed impossible that so superb a new product could fail to sell immediately. Now, there is a strong awareness of the things that can get in such a product's way. "But," one manufacturing executive said last week, "it's bound to sell sooner or later. We didn't misjudge the demand, only the time."

The industry now is understandably loath to guess how many sets it will sell this year and next. The estimate most frequently voiced—but by no means universally accepted—envisions 25,000 to 30,000 sets this year, perhaps 10 times that many in 1956.

• **Contrast**—Looking back on 1954's mistakes, many TV men now blame their overoptimism on memories of black-and-white television's early days. Because black-and-white took hold so quickly, TV people admit, they subconsciously expected color to do the same. This was a mistake.

According to Electrical Merchandising, a McGraw-Hill publication, black-and-white sets sold like this in the early years:

| | |
|-----------|-----------|
| 1946..... | 6,500 |
| 1947..... | 178,000 |
| 1948..... | 975,000 |
| 1949..... | 3-million |

But things were different then. This was during the fabulous postwar boom. Furthermore, TV was an entirely new experience for the bulk of the U. S. public. Black-and-white in its early years had no other form of TV to compete with.



Multilingual posters in Geneva, Switzerland, advertise the Atom for Peace international show. In the combination of commercial exposition, propaganda battleground, and the official U. N. conference, you could see . . .

Geneva: Lifting the Veil From the Peaceful Atom

With each keeping one eye on the others, United Nations members put their atoms-for-peace projects in the showcase this week at Geneva, Switzerland (pictures). The U.N. conference and exhibition was the signal for a flurry of discoveries and announcements as the world's leaders in atomic research compared notes.

Western scientists, for example, hastened to see Russia's exhibit at the Palais des Nations (picture). Judging by models of two research reactors and motion pictures of a power reactor in operation for 13 months, they decided that Russia's atomic development is high-grade but still behind the progress of the U.S., Britain, Canada, and maybe France. The unknown: What, if anything, has Russia done that isn't being shown yet?

Lifting the Veil—Atomic experts from the rest of the world found the Russians' revelations sufficiently intriguing, but other sensations came fast in the opening days:

- **The U.S. Atomic Energy Commission** vouchsafed the first hint of the cost of fissionable fuels and other essential materials: \$25 a gram, or \$11,362 a pound, for each unit of

uranium-235 in uranium containing 20% U-235; \$40 a kilogram, or \$18.10 a pound, for natural uranium; \$28 a pound for heavy water.

- **Dr. H. J. Bhabha** of India, president of the U. N. conference and one of the world's leading atomic scientists, predicted that nuclear fusion (BW—Aug. 6 '55, p31) will be tamed for peaceable use within 20 years. This source of energy, thus far applied only to the H-bomb, offers vaster power from a more plentiful fuel than uranium—the heavy hydrogen found in sea water. Dr. Bhabha's prediction, with fellow scientists nodding public agreement, hints at some new discovery that solves fusion problems.

- **Need Is Great**—Technical papers took an economic slant as experts from many countries stressed the need for large-scale atom power in the next 50 to 100 years. Britain's shortage of conventional fuels is regarded as the goad for the country's double-quick progress in power reactors—progress that left some U.S. commercial exhibitors disgruntled at being somewhat overshadowed in Geneva's downtown exhibition hall.



METAL HANDS to manipulate "hot" materials get a workout at U. S. exhibit.



FRENCH showed electrical equipment that would go with power reactor.



RUSSIAN SCIENTIST (right) listens to Tom Sawyer of Alco Products, Inc., in front of U.S. model of atomic pile.



BELGIANS let visitors try Geiger counter on uranium-bearing rock. Belgian Congo is rich source of uranium ore.



RUSSIANS prominently displayed portraits of Lenin (left) and Bulganin (right). At bottom is model of power reactor.

Aluminum's Third Round Is On

● It's not the official new wave of expansion as planned by Washington.

● Instead, it's generated under the pressure of the plain old factor of demand.

● Meanwhile, the Office of Defense Mobilization still tries to agree on its aluminum plans.

The third round of expansion in the aluminum industry is under way now. Washington hasn't got around to recognizing it officially—but still, it's there. And it's a round in which the industry itself took the initiative without waiting for government sponsorship.

The evidence is plain now in plans announced by the big three of aluminum—Alcoa, Reynolds, and Kaiser:

- Reynolds will add 135,000 tons to new aluminum capacity—a one-third increase in its present capacity. Around 100,000 tons of the extra metal will come from a new smelting plant in Kentucky; the remainder through a rounding out of existing plants at Listerhill, Ala., and Corpus Christi, Tex. For all this work, Reynolds is asking Washington for fast tax write-off certificates.

- Alcoa is getting ready to add 65,000 tons to its capacity by building up its plants at Rockdale and Point Comfort, Tex. This will give it a 10% expansion, and it's not asking Washington for tax aid.

- Kaiser is planning a 90,000-ton expansion at a site it hasn't disclosed yet but that some guess will be at Ravenswood, W. Va., where Kaiser is now building a \$100-million rolling mill (BW—Feb. 19'55, p90). Already Kaiser is expanding its Tacoma (Wash.) plant by 5,300 tons.

These facts alone are enough to show that a third round of expansion is here—despite the fact that the Office of Defense Mobilization in Washington is still considering whether the government should sponsor an official third round.

- **Rounds' History**—It was ODM that set the ball rolling for government-sponsored rounds of expansion in the aluminum industry. The rounds began in 1950, at the start of the Korean War. That year, ODM's chiefs decided that the nation, which was then turning out 800,000 tons of aluminum a year, needed more of the metal as rapidly as possible. The expansion goal for the first round, in 1951, was 446,000 tons; for the second, the following year, it was 231,000 tons.

To get this expansion, the government offered the industry various in-

centives. These were: (1) "certificates of necessity" that allowed fast tax write-offs for depreciation; (2) government-guaranteed loans to ensure, and speed, the companies' expansions; and (3) guaranteed markets, under which all aluminum that the companies couldn't sell on their own would be bought by the government for its stockpile.

It handed these incentives to Kaiser and Reynolds with the idea of loosening Alcoa's grasp of the market.

In 1951, ODM promoted a second round, under the same conditions. In 1952, it tried to push yet another round. This time it wanted to bring smaller outfits into the industry. But this time there were complications; some of the smaller companies lost interest, were caught up in squabbles, or were stricken by financing troubles.

Week after week through this summer, ODM has been trying to decide whether to offer more incentives. It's likely to make up its mind soon.

- **Wide Moves**—Meanwhile, the whole face of the industry is changing. The big three are finding that other companies are getting deeper and deeper into aluminum.

Anaconda has moved in. Next week it dedicates its \$65-million primary aluminum plant at Columbia Falls, Mont., adding 60,000 tons of new capacity. This expansion is part of the government-sponsored second round.

And Aluminum Co. of Canada, which must be figured as a big factor in the U.S. market, has 91,000 tons of new capacity coming in between now and the end of 1956 from its Kitimat plant. (By the end of 1959, Alcan reckons to have Kitimat's capacity stepped up to 331,000 tons.)

Besides these outfits that are now firmly in the industry, there are more companies that would like to get in, or are at least hanging around the edges watching for signs that might prompt them to move.

One of these is Revere Copper & Brass, Inc., which is seeking a fast tax write-off but not a government-guaranteed market for the 60,000 tons of aluminum it expects to get from a \$52.8-million plant that it's now plan-

ning to build at Wenatchee, Wash.

Others on the fringes include Harvey Machine Co., Olin-Mathieson Chemical Corp., and St. Joseph Lead Co. (which would run an aluminum ingot plant as a joint operation).

- **Pressures Behind It**—All this expansion seems a little odd at first, when you remember that last year aluminum was hard to sell. When you look into the background you begin to see the reasons.

The main factor, of course, is the gathering power of the 1955 boom. This has generated enormous demand. But there have been other factors, too, not strictly allied to the boom.

- One of them is copper's troubles. The current copper strike has sliced supplies sharply, and copper's rising price has put a severe strain on its market.

- **Foresight**—A recognized short-term factor has been the recent price buying and inventory building. There's no exact figure of how this has pushed aluminum sales, but it's certain that it has boosted them along. Everyone knew that the industry's labor contracts would run out a month after steel's contracts expired, and that the cost of raises would be passed along. So customers who looked ahead bought before the contracts ended.

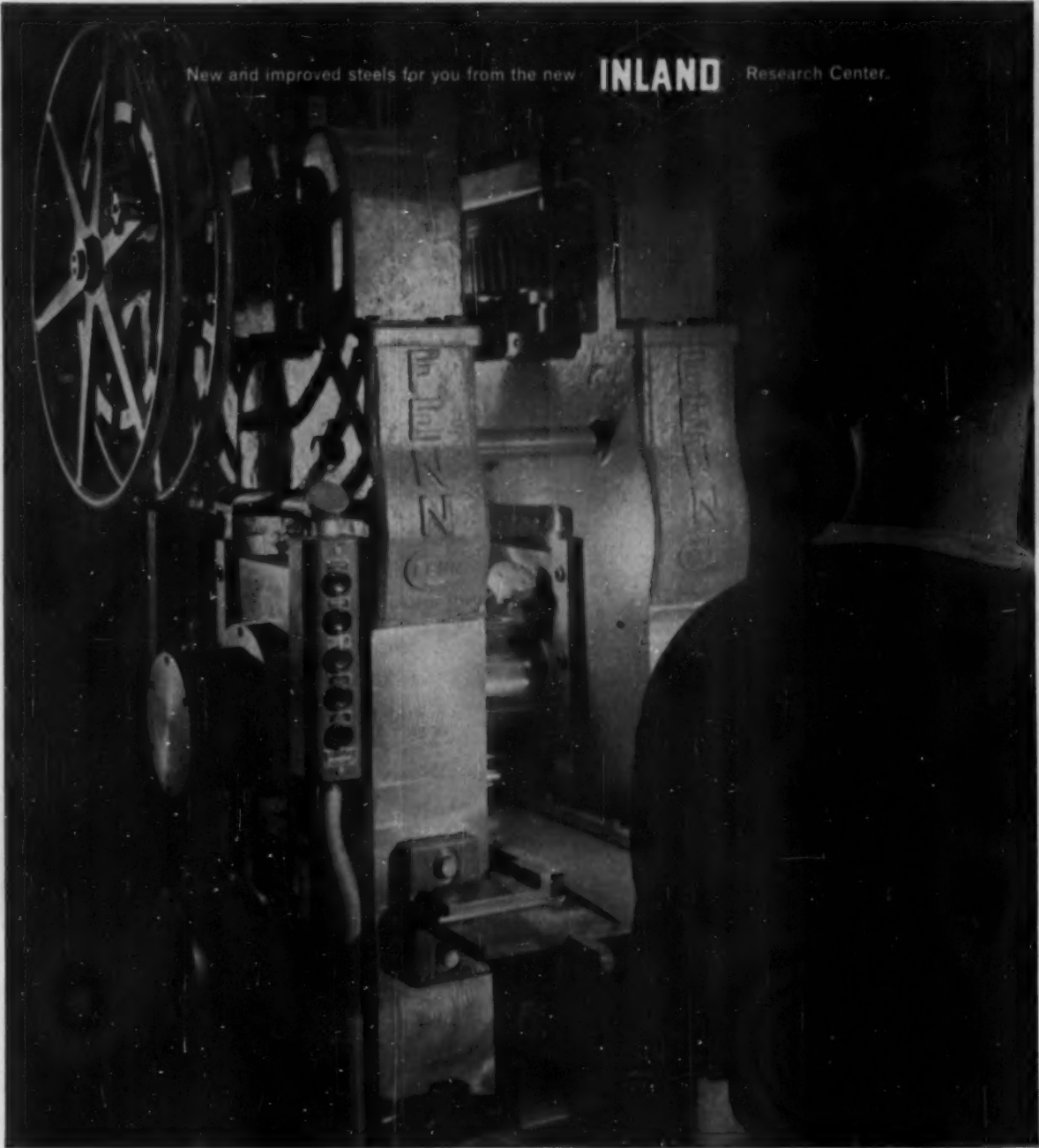
Finally, there's the biggest single factor in the aluminum market—the stockpile. Last year, it took in aluminum at about 25% above its customary rate.

- **Delays**—So it's clear that the market is there for the expansion that's now under way. The question that's holding up ODM's decision probably is: How far should government incentives for expansion go?

It's a question that has produced explosive arguments with ODM. One side—backed by Treasury Secy. George M. Humphrey—argues that the government has done enough, that most companies applying for fast tax write-offs are big enough to handle expansion on their own. The other side argues that aluminum must be urged to expand because of the great demand for it.

Beyond this row there's the noisy bitter tussle between the independent fabricators and the big producers. The independents' cry is that the big producers have been giving them short shrift on supplies.

But out of all the strong words shot back and forth only one thing has come clear: There just isn't enough aluminum this year for everybody.



New and improved steels for you from the new **INLAND** Research Center.

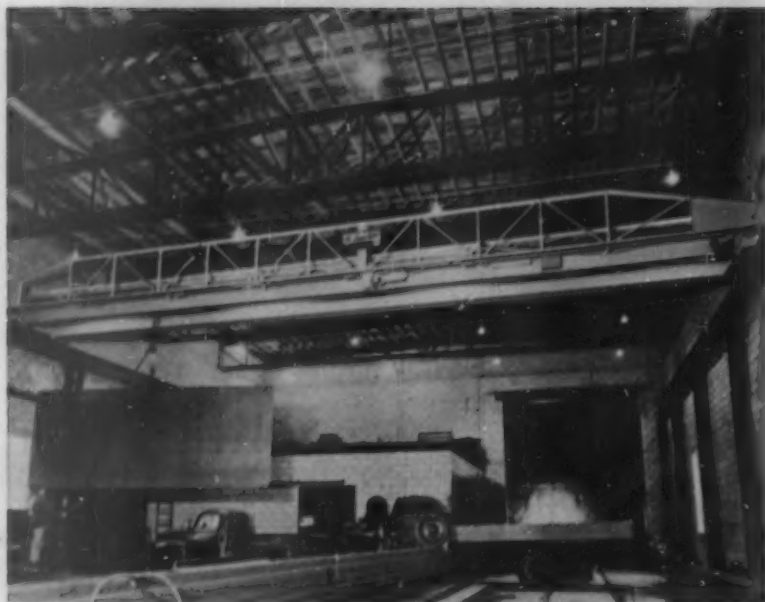
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KING-SIZE HEADACHES (AND MONEY TOO!)**

At Inland, "new ideas" are considered as vital a raw material in steel-making as top grade iron ore and coal. Establishing reserves of this basic ingredient is a continuing job for Inland's research and development people. The new Inland Research Center in Hammond, Indiana, where Inland researchers look for better steels and more efficient ways to make them, is the most recent addition to Inland's "new idea" resources.

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BUSINESS BRIEFS

Major railroads earned a net of \$88-million in June, 46% above the year-ago month. In the last week of July, carloadings hit 795,771, a gain of 16.4% over the matching week in 1954. Meanwhile, a group of trade experts urged the government to set up a stockpile of spare parts for freight cars to help head off a potential shortage of 112,000 cars in case of war.

New York-to-Florida air hearings took a new spin when National Airlines offered to buy Northeast Airlines, one of eight lines seeking CAB clearance for the lucrative southern run. A Northeast official immediately called the offer a mere gesture.

Ohio Turnpike financing plans call for the biggest municipal bond flotation in history. If the program goes through, something over \$535-million bonds will go on the market in one lump, early next year. The North-South highway involved is a Y-shaped one to link Toledo, Cincinnati and Conneaut.

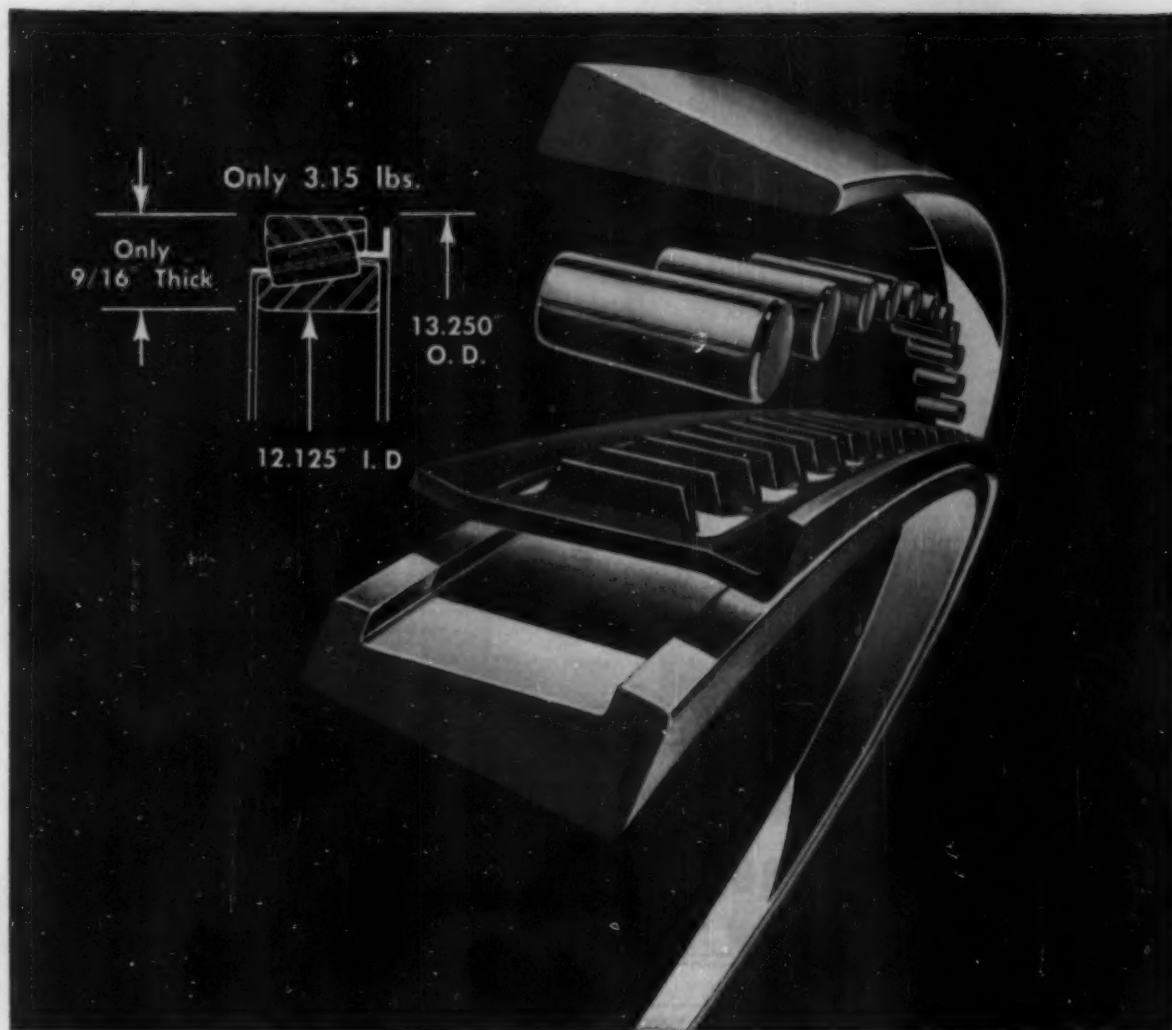
Economic indicators from government sources: July employment hit a record 65-million (page 18). . . . Building outlays were close to \$4-billion, the biggest month ever, and at a seasonally adjusted annual rate of \$42-billion. . . . In June, personal income slid down very slightly from May's all-time high, to an annual rate of \$301.2-billion.

Too much uranium? Canada will sign no more special uranium purchase contracts with producers after Mar. 31, 1956. The government move takes some of the bloom off the hectic uranium hunt; penny uranium stocks have taken a beating on the Toronto market.

Slightly married? Joint operation of some facilities is being studied by the Erie and Lackawanna railroads, but officials of both roads say this does not mean a merger. As of now, the lines provide considerable duplicating service, especially in North Jersey.

1-million lb. more nickel will be diverted from the U.S. stockpile in August, to ease a critical shortage. Defense Mobilizer Arthur Flemming ordered the move, which brings scheduled 1955 diversions to 12-million lb.

Newest FTC member is Sigurd Anderson, former GOP Governor of South Dakota. Anderson was appointed to round out the term of Chmn. Edward F. Howrey (page 75). John W. Gwynne, former Iowa Congressman, will be the new chairman.



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R*eali-Slim* — that's the name we've given our line of extremely thin-section, lightweight bearings. The bearing shown above is a *Reali-Slim*. *Reali-Slim* bearings are really strong, too! The single row, tapered roller bearing we're talking about, here, has a 33,000-lb. radial capacity—with 38,200-lb. thrust capacity. Over 1-ft. in diameter, yet it weighs only 3.15 lbs! These figures tell how *Reali-Slim* bearings combine minimum section with high strength and long life.

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Reali-Slim line. In addition to hundreds of *Reali-Slim* standard sizes, there's a big variety of special races and separators to meet special applications. Kaydon engineers are prepared to give you valuable help with your application problems.

For more information write Kaydon of Muskegon. Ask for engineering Catalog No. 54-RS detailing:

★ *Reali-Slim Ball Bearings* — in Conrad, angular contact and 4-point contact types are available in seven standard cross sections from $\frac{1}{4}$ " to 1.000" and in bore diameters from 4" to 40.000".

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Photo: Ezra Stoller

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banks on long-term economy of JENKINS VALVES

The new 5th Avenue office of Manufacturers Trust Company is a striking departure from traditional bank design . . . for practical purposes. The many innovations are carefully calculated to permit greatly increased efficiency in service . . . to pioneer a merchandising concept new in banking.

Its glass walls include the largest series of panes ever erected, yet the building is technically windowless. Air conditioning, together with all other mechanical facilities, was carefully planned to provide uninterrupted comfort and convenience. Jenkins Valves were selected for all air conditioning, cooling, and heating lines, as in so many of today's buildings that set the pace for future-minded design.

Confidence in the *extra measure* of efficiency and economy assured by Jenkins standards is shared by leaders in every field of construction. Despite this extra value, you pay no more for Jenkins Valves.

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VALVES



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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
AUG. 13, 1955



Now is a good time to look ahead on politics to this time next year when the Presidential nominating conventions roll around again.

For clues on candidates, issues, and prospects, note the developments at the Governors' Conference at Chicago. State political leaders turned out to discuss highways, mental institutions, and other common problems. But the main interest was politics—who will be elected President in 1956.

—●—
The assumption is that Eisenhower will run again.

The President himself is non-committal. While the governors guessed, Eisenhower was at his Gettysburg farm, expressing hope that some day he would be a full-fledged farmer, but leaving the time in doubt.

But the political pros are betting he will run. Republican governors are just about unanimous on this. They helped get Eisenhower the nomination in 1952 when Taft was a threat, and they expect him to stand by the party in 1956. Democratic governors frankly would like to see the President stand aside (most of them doubt he can be beaten). But most think he will be persuaded to run. A few from the South will support Eisenhower.

—●—
Vice-Pres. Nixon will be an issue. Eisenhower's age—he would be 70 before a second term is over—means that a reelection try would focus special attention on the Vice-Presidential candidate. Nixon doesn't share Eisenhower's personal popularity. But there's no sign that Eisenhower would drop him in a new race. In fact, all signs point the other way. Eisenhower has been building up Nixon all the time. Latest example was the Nixon Cabinet meeting (with photographs) when the President was in Geneva.

—●—
Harriman's strength is a surprise. It reflects a feeling among both Republicans and Democrats that the Democratic candidate will be forced far to the left in next year's struggle. And Harriman is considered the man who can stand for a new "New Deal."

Stevenson probably has more strength at this time. And he has the endorsement of Harriman. But Stevenson has no great appeal to city bosses. And it's significant that Harriman is doing nothing to discourage efforts to put his own name at the head of the ticket.

Sen. Kefauver is in the picture. He rode to fame four years ago by exposing crime. This embarrassed some of his own party's local bosses, and they were against him in 1952. But Kefauver now is trying to "retread his glory." He will visit Russia, then investigate monopolies and juvenile delinquency.

—●—
The GOP bets on Eisenhower's achievements and his appeal to voters:

There's peace. It is still uneasy, with no certainty that the talks with the Reds will avoid World War III. But there are no casualty lists from battlefields. And the draft takes fewer young men all the time.

And prices are stable, while employment and wages continue to climb. The nation is in the biggest non-war boom it has ever had.

Note the appeal to women, whose vote is bigger every election year. Their dollars go further in the grocery store. Their sons are at home longer.

—●—
The arguments pushed on Eisenhower by members of his own party come down to this: The job has just been started. Under the Democrats,

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
AUG. 13, 1955

the danger of a new war was always close. And inflation was allowed to nibble away at the economy in order to finance bids for bloc support—from home buyers, farmers, the aged, labor, small businessmen, and others. The GOP leaders miss no opportunity to tell the President that if he retired he'd risk killing his major objectives.

—•—
The case of the Democrats against Eisenhower is on these lines:

Foreign policy is wishy-washy. At first, Eisenhower was very tough. The Iron Curtain would be rolled back. Satellites would be liberated. Chiang would be unleashed. Indo-China would be protected. And the further extension of Communism would be met by massive retaliation.

Democrats charge an Eisenhower reversal. Generally, they applaud the peace effort now under way. But they insist it involves a change in direction that is unprecedented in American history.

—•—
On the domestic side, it's "moral duplicity" that the Democrats hammer. Their point is that Eisenhower asked for liberal legislation—school aid, health, social security, and other measures—but didn't push them.

One top Democratic spokesman puts it this way: Eisenhower proposes programs that are popular with the voters. But the programs stop there. There's no follow-up to get them enacted. Pushing them would upset his balanced budget hopes and delay tax cuts that GOP backers are counting on.

—•—
Will these anti-Eisenhower arguments sway voters, when there's peace and times are good? Democratic leaders can't count very much on that.

The answer of a prominent Presidential candidate: Frankly, they won't. They appeal to the intellectuals, the students, and the historians.

Talbot-like incidents are more important. The Democrats are banking heavily on prospects that they can show a "too close tie-up" between businessman officials of the Administration and their old connections. Investigations are planned to prove the point.

—•—
More than a score of investigations will go on this fall and the number will increase next year, when Congress comes back. Power to investigate was the big political gain the Democrats scored last year when they won majorities in both the House and Senate.

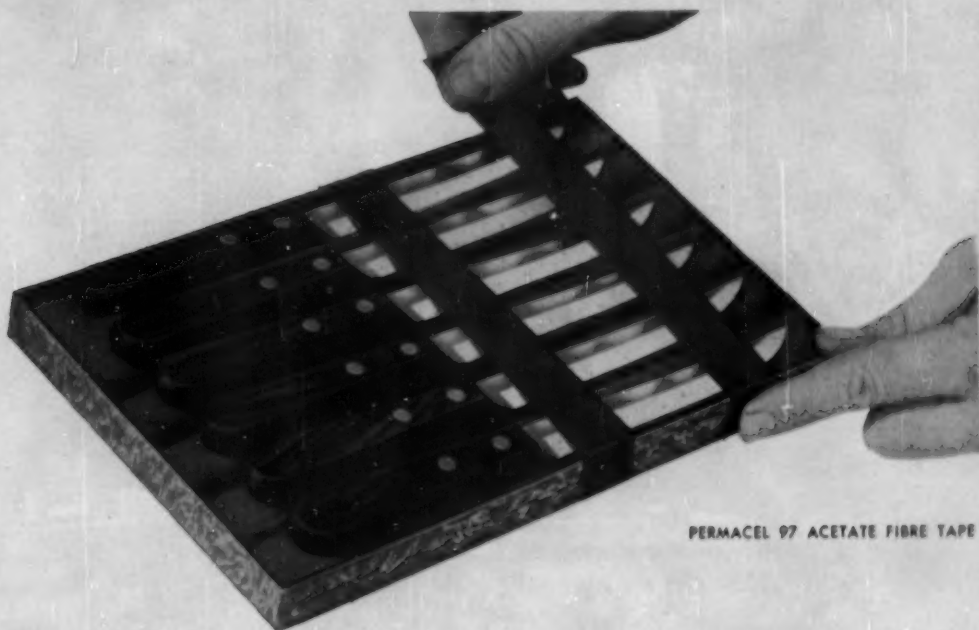
—•—
Lack of investment capital in the South will be investigated and the effort will be made to show the GOP favors other areas on money matters. Aim, of course, is to stop some of the split-ticket voting in the South.

Position of low income farmers will be probed to show that Administration policies hurt family farms, help the big farms.

Businessmen in government will be called on constantly to explain their decisions. The effort will be to show "favoritism."

—•—
It looks like a rough political year ahead. Political maneuvering is bound to influence business decisions. But what seem to be radical positions before voting time usually are modified before the time for action: If Eisenhower runs, odds will be high against big policy shifts.

Whatever the job...



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ON QUIET CAMPUS of Gould Academy at Bethel, Me., National Training Laboratory in Group Development this summer pushes its program of research and training in . . .

What Makes a Small Group Tick

Almost every businessman today has at least heard of the new branch of behavior science called group dynamics. It's the study of how and why groups of people act as they do. Pause there a moment and you'll begin to see why some people get a little testy about such things as group dynamics: It's a study with distant fuzzy edges, and it lends itself to the accumulation of a mass of research that doesn't fit into neat compartments.

Like some other new-born sciences, group dynamics reaches out wide, seems to be headed in half a dozen different directions simultaneously. This makes

it tough for a businessman to figure out which of its many areas of study serve him best.

One of group dynamics' earliest excursions was into the consumers' minds. It headed that way when marketing men called for scientific information on mass buying motivations. And the behavior scientists gave marketing men some startling new tips. (BW—Aug. 14 '54, p. 50). Its next move around the business world was into employees' minds. There it turned out for management some brand-new theories on employee relations.

• **Fresh Twist**—Now group dynamics is

progressing in another direction. This time the aim is to turn up the facts about how and why small groups act as they do. Business wants the social scientists to get useful data on this. The reason is plain. If a businessman is skilled in his understanding of the mechanics of a small group's behavior he will be able to unlock more of the potential of his staff, his board, or his executive committee.

This, roughly, is what the people in the pictures on these pages are after. They come from the fields of government, business, education, religion, and health and welfare. They've just spent

three weeks finding out about group behavior at this summer's second session of the National Training Laboratory in Group Development.

NTLGD is a branch of the National Education Assn., and this is the ninth year it has operated its unique laboratory on the campus of Gould Academy at Bethel, Me.

• **Mecca in Maine**—In those nine years, the annual summer confab at Bethel has come to be regarded as the Mecca of small group research and development. So far, the laboratory hasn't been concerned with specific business applications of its work. But this coming winter, NTLGD will run its first lab planned exclusively for management men with a two-week program oriented toward management problems at Columbia University's Arden House.

From this summer's two, three-week sessions at Bethel you get an idea of

what next winter's management-oriented session will aim at.

I. What It's About

The things that the 125 delegates at Bethel learned have direct application to business. From Bethel's faculty, drawn from the parent body, National Training Laboratory, as well as psychology and sociology departments of half a dozen top universities, delegates learned how to:

- Make a quick and accurate diagnosis of what's going on in a group, or between groups.
- Gain insight into their own behavior as members of a group.
- Gauge the effect of their own behavior on the group.
- Develop group leadership skill.
- Evaluate evidence on human relations turned up by recent research.

To accomplish this, the Bethel faculty uses, in part, such standard training devices as lectures, practice in group situations, and elaborate role-playing.

But Bethel also gives heavy emphasis to its own style of group situation. It puts its students together in small groups—and quite literally lets them alone to sit at a table and do what they please.

In this kind of training group there is no agenda, no leader, no instruction. It sounds useless and pointless. Indeed, when you first see and listen to such a group operating it appears to be nothing more than a waste of time. But there is a goal. Bethel feels that the agenda-less, leaderless, instruction-less group sets up a basic situation that permits group members to watch other members' behavior with goldfish-bowl-like clarity.

The situation is also disturbing indi-



PLAY ACTING their roles as pressure groups, these NTLGD delegates push hard for their interests in elaborate training session.



FIGHTING as hard as any aggressive small-town group, their faces show how immersed they get in their problems as . . .

. . . REGIONAL CITY, THE COMMUNITY CONTRIVED AS A PROVING GROUND FOR GROUP SKILLS, WARMS UP TO THE QUESTION: SHOULD WE HAVE A NEW SCHOOL?





BORED with its problem, when task isn't stated clearly, training group can't get anywhere. But when . . .



INSTRUCTOR states problem precisely, there's a quick response. Moral: If you run a group, make the objective crystal clear.

vidually. As a result, a member of a group feels more aware through personal tension or uneasiness or dissatisfaction each moment of the group's discussion or silence.

• **Emotional Matter**—That matter of "feeling it in the guts" is the real key to Bethel's aim. Director Leland P. Bradford, who, as head of National Training Laboratory, runs Bethel, explains why when he points out that the behavior sciences aren't like physical sciences. A mathematician can't really "feel" calculus, nor can an engineer "feel" frame stress. They can read about them and they can, with proper tools, put them to work. But, says

Bradford, study and observation aren't enough when it comes to human relations. In this field you can't make progress for long if you don't participate.

Bethel's idea in leaving out agendas and leaders for its groups is that when the pressure that an agenda imposes on a group is removed, it's possible to see more clearly how behavior develops among group members. Many psychologists agree that this is a fine theory—but it still leads to some pretty baffling situations.

This summer, Bethel's delegates gathered, 15 or so to a group, each morning during the three-week sessions.

For two hours each day they sat at their tables talking. They had no objectives, no agenda, and the faculty member present at each group's table deliberately avoided participation.

Even after eight days, some groups still couldn't agree on a topic.

But even in these groups you could begin to see some of the mechanics of group behavior that don't come to light in normal group situations.

You could see how one man's personality irked the group, how a fuzzy proposal stultified action; how blatant grabs for leadership could be beaten down by a simple lack of interest in the would-be dictator.

• **Staging Problems**—And even more to the point are the sessions devoted to role-playing, at which another phenomenon of group behavior is demonstrated. The pictures on this page illustrate this. A group given an unclear goal (top picture) is bored, can't get discussion started. It spends its time floundering about, trying to define terms. But when a group leader, a faculty member, gives the group a clear objective (lower picture), action follows immediately.

The culmination of the groups' practical work at Bethel comes in the second week of the session, when they are faced with an elaborately conceived intra-group problem.

Here, some half dozen groups play the roles of pressure groups in a community. The problem this theoretical community was faced with at one session this summer was whether it should build an expensive new school.

Playing out their roles to the hilt each of the groups pushed for its own special interest. The carpenters union connived with the contractors association, the real estate board tried to unload some marginal property, and the taxpayers club let go with a familiar pained cry.

To make the problem more realistic, the community published a daily newspaper (and the editor had his own ideas about the school, too). Finally, four men were billed to play the role of "informal powers," the behind-the-scenes operators found in every community, through whom wonders can sometimes be worked.

For Bethel's delegates, this week of role-playing added up to a practical demonstration of how they could use what they had learned about the theory of group behavior.

• **Self Conscious**—For each study session at Bethel, theoretical and practical, there's a built-in session of introspection and self-analysis. These built-in sessions are vital, Bethel's faculty insists, because it's largely by introspection that you solidify what you've observed and felt as a participant in a group.

Bethel's basic objective, Bradford

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the Comptroller Will Like It!

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Chicago & Eastern Illinois Railroad
Chicago, Burlington & Quincy Railroad
Chicago, Indianapolis and Louisville Railway
Chicago, South Shore and South Bend Railroad
Colorado and Southern Railway
Delaware and Hudson Railroad
Denver & Rio Grande Western Railroad
Duluth, Winnipeg & Pacific Railway
Erie Railroad
Fort Worth and Denver Railway
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Gulf Coast Lines
Gulf, Mobile & Ohio Railroad
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Missouri Pacific Railroad
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An improved version of the Rockwell-built Delta 8" Jointer reduces change-over downtime and cuts operational costs in furniture plants, woodworking shops, and maintenance operations. Price of the redesigned machine has not been raised, although several new features greatly increase the speed and ease with which it can be adjusted and operated. Longer life

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says, is to help develop "strong and wise individuals who can, alone and with others, reach good decisions about their problems."

II. Where It Came From

Bethel found its method of aiming for that objective in the work of psychologist Kurt Lewin, considered the father of group dynamics. Lewin's work in the field became widely known in 1946, when the State of Connecticut called him in to solve a serious problem in race relations. He evolved a combination of practical and theoretical aspects of group dynamics and development, and the next year, Bethel took this for the nucleus of its syllabus. Lewin died in 1947, but not before he had done some key research into group dynamics. Stuart Chase, in his book, *Roads to Agreement*, has called Bethel "a kind of a memorial to Kurt Lewin."

Though Lewin gave Bethel its impetus, it has taken sizable efforts by Bradford and his staff to keep up with the growing enrollment and to keep sights always set on fresh research and training methods.

• **Expansion**—The program started out with one session a summer, but pressure for attendance forced Bradford to set up two sessions.

In recent years, another special feature has been incorporated. Qualified delegates, chiefly those who have been through the primary session once, can take a "training of trainers" course. This substitutes the theory of training for the normal diet of theory of group development.

A feature of the Bethel training method is the high staff-to-student ratio. This year there was one faculty member for each four delegates, a proportion far higher than found on college campuses.

The total summer staff averages around 35. Bradford and two others come from NTL; the other 32 staffers this year were social and clinical psychologists, education professors, sociologists, and psychiatrists—drawn from university centers. The staff is leavened with training directors from industry and government.

• **Gains—and Costs**—With such a staff, Bethel feels it has certain advantages. It can carry on experimentation in human relations, and at the same time, study and perfect applications of its training method.

But such elaborate staffing costs plenty of money. The \$200 course fee and the \$125 board-and-room charge meets only about two-thirds of what it costs to plan and run Bethel.

For its first seven years, Bethel had a Carnegie Fund grant and, at first, some Navy money. The National Edu-

cation Assn. chipped in some administrative funds and Michigan University's Research Center for Group Dynamics helped out with staffing.

It now costs about \$100,000 to run a summer at Bethel. Bradford's problem is to keep things going at an expanding rate without pricing attendance out of the reach of some occupational groups. Today, Bethel comes closer to being self-supporting because NTLGD has increased the number of its year-round training activities and so distributes its sizable overhead over more sources of income. Despite the gain here, Bethel now has a campaign under way to get funds from businesses interested in pushing research and training in group development.

Bradford figures NTLGD is a good buy for business because Bethel's faculty members are also topnotch researchers. Some of Bethel's staffers have already made names for themselves in industry-connected social science research and development.

Also, the fact that many different scientific disciplines are welded together in the Bethel operation means that the bewildering terms of the social sciences may become standardized sooner—an appealing prospect for those businessmen who have tried to find their way through the present terminology.

MANAGEMENT BRIEFS

Employer responsibility for injuries to workers during off-hour recreation has been upheld by the Illinois Supreme Court. Jewel Tea Co. wants a rehearing of the ruling that the company is liable for injuries to a worker in a ball game with other Jewel employees. Some think the ultimate decision will have important bearing on company recreation programs. The court held there were "subtle pressures" to get men to play on the company team.

There's no end to management's appetite for self-improvement. This week, American Management Assn. figures showed that some 5,000 executives will attend seminars at about 350 management meetings from September until next June.

Monroe Calculating Machine Co. is giving factory workers a taste of what happens to the products they make. Three rank-and-file employees were sent out on a full day's schedule of calls with three salesmen. Then their reactions were published in the plant magazine. The idea: to convince production workers that selling is no breeze. Monroe believes the point was well established.



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. . . engineers specify Powell Valves because they're dependable and economical. Engineers also know Powell has a complete line of valves."

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Available through distributors in principal cities. Made 1/4" to 30" and for 125 pounds to 2500 pounds W.S.P. Bronze, iron, steel and corrosion resistant metals and alloys. On problems, write direct to The Wm. Powell Company, Cincinnati 22, Ohio.



THE COMPLETE QUALITY LINE

Powell Valves

109th YEAR



"Working logs" may look easy—but you're doomed for a soaking if you're not an experienced specialist.

Linking horsepower to industrial equipment may seem easy, too, until the power linkage fails and costly downtime ties up your machine . . . or even breaks up your entire work cycle.

That's why more and more powered equipment users specify Twin Disc power linkage—and why more and more powered equipment manufacturers install Twin Disc power linkage as standard equipment. Since 1918, Twin Disc has specialized exclusively in the design, manufacture and application of both Friction and Fluid Drives. As a result, Twin Disc provides exactly the right Drive for essentially all requirements of industrial power transmission.



This sawmill, powered by an International U-430 engine, gets faster production, smoother control, and longer life by driving through a Twin Disc Friction Power Take-Off. Capacities of Twin Disc Friction Drives range from fractional to 1325 hp; of Fluid Drives from $\frac{3}{4}$ to 850 hp.



TWIN DISC CLUTCH COMPANY, ROCINE, WISCONSIN • HYDRAULIC DIVISION, ROCKFORD, ILL.

Branches or Sales Engineering Offices: Cleveland • Dallas • Detroit • Los Angeles • Newark • New Orleans • Seattle • Tulsa

Dow Stock Plan

Employees of the big chemical company get their seventh postwar chance to buy stock out of pay.

Employee stock purchase plans—once common in industry but severely set back by the 1929 market crash—are again becoming popular with management.

Earlier this year, the log-jam may have been broken when General Motors, du Pont, and other companies announced variations on purchase plans to let employees acquire their securities by easy stages.

Next month, employees of Dow Chemical Co. will get their seventh chance to buy Dow common since the end of World War II. Between Sept. 6 and Sept. 30, they can agree to buy stock through payroll deductions up to 10% of their annual income.

A look at Dow's plan, started in 1948, gives you a pretty fair picture of (1) how much interest employees have, (2) what safeguards can be used to protect employees in case of adverse market conditions, and (3) what management thinks of the whole scheme (BW-Mar.28'53,p130).

• **High Interest**—Since 1948, participation at Dow has risen from 19% of the employee total to as high as 45% in 1952. The current plan, just ending, had about 38% participation.

In the first years of the plan, Dow's stock took a spectacular rise—and employees not only acquired a dividend-earning investment but also made enviable profit on the value of the stock. That helped to build up interest among the employees.

In one year—1953—Dow decided to omit offering a plan, since the business outlook at that time raised some early storm signals. In 1954, Dow once more put the plan into operation without any appreciable decline in worker interest.

Said a Dow spokesman: "You can see we feel pretty good about the success of our stock plans."

One factor that perhaps helps Dow sell its program: Workers are protected from losses up to the time they make the last payment. They can choose to take back their money each year rather than receive stock.

Option Plan, Too—Dow has also announced a stock option plan for key employees, subject to stockholder approval Aug. 24. It sets aside 225,000 shares for key employees above a certain salary level and, in addition, provides for special options to be granted at the board's discretion. **END**

All postmarks are actual reproductions. Post offices mentioned in the text really exist.



The true small town is the Grit small town

You miss the Mark (Ill.) when you judge the true small town by population alone.

You've got to consider geography as well as numbers. Your true small town is a place of 2500 or less, far enough away from a major city not to be magnetized by it. It's what leaps to your mind when you think of bandstands and village meetings and Fourth-of-July oratory.

Put 16,000 such small towns together and you've got a market of mighty proportions. But a market not so easy to approach. Many of the towns don't have newspapers or even newsstands. Magazine subscription crews don't reach them. TV coverage is weak. True small towns are America's least exploited market.

There is a path to them though. Grit. Here is the one national publication edited specifically for small towners, delivering exactly 58.58% of its 800,000-

plus weekly copies to them. Your true small town gets news from Grit, recipes and household hints from Grit, comics and healthy fiction from Grit, man-about-the-house projects from Grit, inspiration from Grit. Grit is his mirror to the world.

All of which makes it logical that small-town families buy the products they see advertised in Grit. That's a subject we delight in talking about, because we have a Peck (Idaho, Kans., Mich.) of indisputable proof.

You can have a dominant, year-round campaign in Grit for the cost of one full-page ad in a mass-audience magazine. A small price, surely, to Contact (Nev.) the Fertile (Iowa) Fields (La.) Grit represents.

Grit Publishing Co., Williamsport, Pa. • Represented by Scolaro, Meeker & Scott in New York, Chicago, Detroit, Philadelphia; and by Doyle & Hawley in Los Angeles and San Francisco.



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HORIZONTAL TRANSPORTATION

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MOVING PEOPLE HAS ALWAYS



ANOTHER OTIS FIRST! The Otis TRAV-O-LATOR is a modification of the world famous reversible Otis Escalator—another Otis first that was designed to move people, *not materials!* It's as easy to ride as an escalator. Its moving surface is an endless platform of metal escalator treads. It is smooth gliding for safe riding; cleated for safe traction; comb toothed for safe interlocking between treads and for safe stepping from moving treads to comb plates at entrance and exit points. In addition, it has the Otis escalator balustrades and handrails. All, long proven safety features.

There's practically no limit to the length, flexibility, or use of the TRAV-O-LATOR. Ask any of our 295 offices across the United States and Canada for details.

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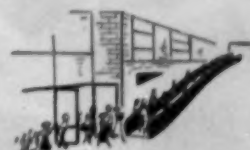
SHOPPING CENTERS



RAILROAD STATIONS



SPORT STADIUMS



SCHOOLS

Flying Green Goods to Market

That's the plan of a food processor and an airline, and Grand Union is interested. Key points: fast prepackaging of Florida crops, quick delivery to the North by air.

It won't be long before you'll be able to buy prepackaged fresh fruit and vegetables at your supermarket all year round—only 24 hours after they have been picked off the farm. By next winter, in fact, New Yorkers probably will be taking advantage of this new marketing speedup, worked out by an airline, a supermarket chain, a food processor, and Florida produce growers. In Miami last week, representatives of each got together to talk out the details (picture, below).

Two things make this ambitious plan possible: air freight and prepackaging at the source of supply.

• **Backed by Airline**—Prime mover in the deal is Riddle Air Lines, Inc., a fast-growing air cargo line based in Miami. Riddle is constantly looking for ways to drum up new steady business. So the airline was interested last year when Florida produce processor Charles Burns came in with a new system for cleaning, trimming, and chilling fresh fruit and vegetables, sealing them in a transparent plastic wrap.

Riddle flew a limited quantity of Burns's prepacked produce to hospitals and institutions last season, but both the airline and the processor wanted big

volume. Riddle steered Burns toward the supermarket chains, and Grand Union Co.—whose Northeastern outlets are expanding rapidly—decided to take a look.

• **Hanging Fire**—Last weekend, Riddle flew B. W. Winters and Walter Eggers (picture), Grand Union's produce manager and head buyer, to Miami to talk facts with Burns and local area growers. Grand Union hasn't officially made up its mind to buy Burns's output yet, but Winters and Eggers were enthusiastic.

Grand Union, like other super chains, firmly believes prepackaging is a comer; nearly 40% of all produce now sold in retail stores is prepacked, Winters estimates.

"Prepackaged produce has been hanging on the fence for nearly 10 years now," Winters muses, "and air freight may be just what's needed to push it across."

• **Other Airlines**—If the deal goes through it will not be the first time that fresh produce has been shipped via air. Slick Airways, American Airlines, and United Airlines, for example, fly vegetables and fruit out of California's Imperial Valley for eastern markets.

But for the most part, this is a specialty business—asparagus, dates, and tomatoes bound for quality food stores. And the business is mostly handled through brokers. There have been a number of attempts to make the sort of arrangements that Riddle is working on, but as one major airline man says, "We haven't been able up to now to coordinate grower and outlet."

Other deals similar to Riddle's are, however, in the works. American Airlines, for instance, is now trying to close on a deal that would fly 5,000 lb. of fresh produce out of the West Coast nightly for a big chain on the East Coast.

• **Buying Crops**—The Burns-Riddle-Grand Union deal—if it goes through—would work this way:

Most of Florida's big fruit and vegetable growers (except citrus) are within easy trucking reach of Miami. Burns works both through brokers and directly with farmers, carefully selecting crops of lettuce, tomatoes, corn, beans, potatoes, parsley, celery and other greens.

Burns then collects the crops at his Tropical Food Products processing plant just south of Miami.

The produce is washed, all waste trimmed off, sometimes bathed in a very mild chemical solution to kill insects and preserve the product. Then it's chilled and sealed in transparent plastic bags. But Burns is counting his production potential in thousands of pounds per day during the four- to five-month winter season. And Burns, together with A. B. Curry—Tropical's administrative head, also a well-known local grower and aviation enthusiast—is already thinking in terms of expansion.

• **Flying North**—On the afternoon of the same day the produce is picked, the prepacked bags are trucked to Riddle's hangars at Miami's International Airport, 20 minutes away. There, Riddle is designing special cooling lockers and equipment to handle produce. Riddle plans to fly several planes each evening loaded with produce—up to 12 tons of it. High flying altitudes provide natural refrigeration.

The produce would go to Grand Union's New York area warehouse near Newark Airport, and, according to schedule, reach the retail outlets one



MIAMI TALKS bring Grand Union's B. W. Winters (third from left) and Walter Eggers (second from right) into discussion with growers, processors, air freight people.

LOADING of planes at Riddle's Miami base is expedited by materials handling equipment. ➔



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office chair**

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ing Chair Control now features nylon
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a chair the "wobbles."
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Get your free copy of "The Central South—where industry goes... to work." This colorful brochure tells why more and more industries are relocating or building branches in the Central South.



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THE NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY

morning—or at the most, two—after it was harvested.

• **Cost Problem**—The deal has many ramifications. And problems were hashed over at last week's meetings. Some of the growers feared that processing costs and higher air freight rates would push retail prices too high.

Burns assured them, though, that he counts his costs in mills per tomato, potato, ear of corn, or head of lettuce. At retail, the package would be only "pennies more" than its equivalent in bulk.

The big selling point is quality. Winters, Burns, and Riddle's John Paul Riddle all firmly believe in the consumer's upgraded tastes. Give him something better, they agree, and he'll pay a little extra for it. (Grand Union even plans a money-back guarantee on Tropical products.)

Because the packs contain no waste, the retailer won't be paying freight on material that has to be discarded.

• **Cost Competitive**—Then, too, the prepackaged airborne produce won't always cost more. John F. Barrett, Riddle's tariff expert, has worked out a chart to show the peaks and valleys in pricing based on the law of supply and demand. Tropical claims it can assure the retailer of a fairly constant supply at the same price. Thus, when demand has pushed bulk prices up and supply down, the storekeeper could even conceivably undersell bulk produce. When supply is up and demand down, he can go back to pushing the Tropical products on the basis of their extra quality, rather than on price.

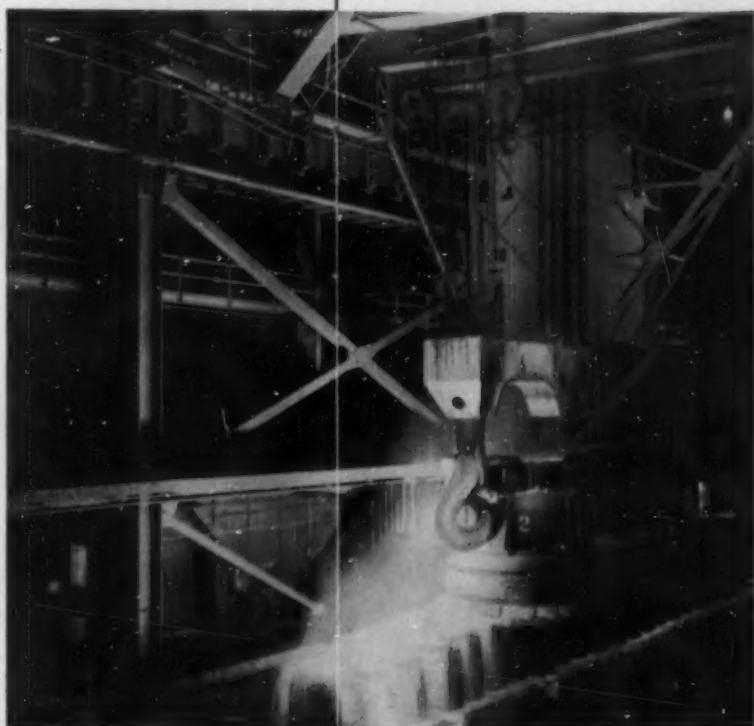
Paul Riddle believes, too, that freight rates won't always be significantly higher than ground cargo rates. Air rates have already been cut several times; Riddle sees them coming down further with the advent of more steady big-volume freight and new airplanes and ground equipment.

• **Promotion**—Riddle is flying into the plan on both wings. The airline has even printed up tags to go in the food packs, emphasizing to the customer that this bag of corn or tomatoes was flown to her overnight—by Riddle Air Lines, of course. Riddle is also ready to work out joint advertising and promotion with Tropical and Grand Union when the deal is sealed.

Winters was impressed with the possibility that Tropical's packs could be a way of merchandising unfamiliar items—such as okra—in the North.

Some of the growers are happy over the deal because it cuts out some of the middle-man steps in getting their produce to market. Paying brokerage, packing, shipping, and wholesaling fees all along the line cuts their profit, these growers complain. The Tropical-Riddle-Grand Union direct line of distribution eliminates some of these steps. **END**

Morgan cranes stop "on a dime"



● BRAKING a Morgan crane under full load is as easy as stopping the family car.

Morgan hydraulic crane brakes provide maximum safety and pin-point accuracy in spotting heavy loads . . . another vital link in the chain of features that makes Morgan cranes best in the business.

Performance records prove that advanced design and heavy-duty construction of Morgan cranes make them less costly to operate and maintain. Let our representative show you how to save the most by buying the best . . . Morgan!

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The Morgan Engineering Company manufactures overhead electric traveling cranes, gantry cranes, charging machines, plate mills, blooming mills, structural mills, shears and saws.

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In Marketing

• • •

Former Lincoln-Mercury Dealer Sues Ford for \$1-Million Damages

In another suit challenging auto company relationships with dealers, a former Lincoln-Mercury dealer in Winston-Salem, N. C., has filed a \$1-million triple damage suit against Ford Motor Co.

Miller Motors, Inc., filed the private antitrust suit in Federal District Court in Greensboro, charging Ford with monopolistic practices in violation of the federal Sherman and Clayton antitrust acts. The suit charges that Ford terminated the company's franchise last August under a standard 60-day notice clause when, says the dealer, Miller Motors refused (1) to put on a "blitz" sale; (2) to fire its sales manager; and (3) to "pad" car prices as requested by Ford's regional sales manager.

The new case is of particular interest inasmuch as Justice Dept. antitrusters have been investigating Ford-dealer arrangements since late 1953.

The new court suit describes the 60-day termination power as a "measure for coercing" Ford dealers, making them "captive dealers" or "controlled agencies of Ford."

The treble damage suit—unlike other recent cases brought by disenfranchised car dealers—apparently does not allege a conspiracy on the part of the motor company with other dealers.

Among the many coercive practices charged in the Miller suit are allegations that Ford forced Miller to contribute large sums of money to the Ford Lincoln-Mercury Dealers Advertising Fund, Inc., a Jacksonville, Fla. dealer cooperative advertising company; make repairs on new but defective Ford cars at price rates set by Ford; take more cars than its territory could absorb; and accept "tie in" sales of tools, parts, and accessories on an exclusive buying arrangement with Ford.

Miller Motors, now a Hudson-Nash agency, claims that because of the Ford tactics, the agency lost over \$64,000 in 1954, the year the franchise was revoked.

Ford says, "We never comment on matters in litigation."

• • •

Another Food Chain Forges Into Houston

Houston appears to be due for a major invasion by the big food chains. The latest to go in is Great Atlantic & Pacific Tea Co., which has just said it is planning "several" new supermarkets there. And it is building another warehouse to service the area.

A few months ago, Kroger Co. got into Houston by buying up the local chain, Henke & Pillot (BW-May-21'55,p143). Safeway has let it be known that it is looking in Eastern Texas, too.

In recent years, the Texas city has been an independents' stronghold. It's true that A&P used to be in

there strong, with some 60 stores, mostly small ones. But Henke & Pillot and H. Weingarten, Henke's chief rival (BW-Jul.3'53,p90), practically squeezed the big chains out. Today A&P has only eight stores in the city, though it has maintained a warehouse, which services the independents.

It seems inevitable that the majors should move in. For one thing, the area is growing so fast that it's rich bait for them. For another, the big supplier to the independents, Schumacher Co., has been losing ground during the past few years.

• • •

No Waiting in Line For a 1955 Cadillac

For just about the first time since the end of World War II, you can walk into a Cadillac showroom and order a Caddy for immediate delivery. Up until now, Cadillacs have been in such demand that you had to go on a waiting list to get one.

But last week Lundburg Cadillac in St. Louis advertised, "We've been waiting 10 years to run this ad: Immediate delivery of brand new 1955 Cadillacs."

Officials of the Cadillac Pontiac Motor Div. of General Motors concede that this same situation prevails at other dealerships, providing the customer is willing to take what's in stock.

This would seem to imply that the Cadillac magic has started to wane. But Detroit doesn't think so.

The division went into the 1955 model run with 93,000 unfilled orders in its pocket. That backlog is naturally dwindling now that Caddy is close to a model change. Many customers who have been on the waiting list for months can't see why they should pay \$5,000 to \$8,000 for a brand new car in August that will be a year old in October.

The competition likes to think that Cadillac Div. has purposely held production down to effect a kind of planned shortage. Again, however, Detroit observers don't think this is true.

In 1948, Cadillac turned out 66,209 cars. By 1950, the figure was almost double—110,535. The pace slowed during Korea, was up to 123,746 in 1954. This year that tally will be about 150,000. To do this, the division is running two shifts daily and has heavy overtime schedules—something no auto man likes. The division isn't through expanding production facilities by any means.

This year, the car made heavy gains against its high-priced competition (Buick Roadmaster, Packard, Lincoln, and Chrysler New Yorker and Imperial). In the first half, Caddy had 48% of this market, a gain of 11% over 1954.

• • •

Carnation Name to Bloom In Frozen Seafood Field

What could prove to be a big new name in frozen seafoods took the plunge last week. Aquafoods Corp., of Tampa, Fla., a brand new company, announced it would coordinate the production and marketing of

Kroehler's merchandising division discusses a fresh new look in furniture

"Plastics molded by General American helped us create a revolution in furniture"

"make it different . . . make it better . . . all the way through."

That's what our salesmen told us . . . and that's what we did. We thought about new ways of building furniture—and we took our problem to General American. We found we could have reinforced fiber glass molded into a strong shell-like frame by General American's Plastics Division . . . that they could apply tough, easy-to-clean vinyl directly to the fiber glass to form a durable, good-looking covering.

We discovered that this raw construction gave us complete freedom in designing furniture. We used luxurious fabrics and foam rubber padding to create upholstery as comfortable as it looks. As a result, this new furniture, we found, was not only new in design, but has great strength, is easy to care for (washable, fadeproof and scuff-resistant), attractive in appearance, and wonderfully comfortable to use . . . thanks to contour molding.

Soon, you'll be seeing Kroehler's "Revolution in Furniture" (under the Valentine-Seaver label) in your favorite store windows. Look it over. You'll like it."

It pays to plan in plastics molded by General American



... And this is the reinforced plastics frame



PLASTICS DIVISION

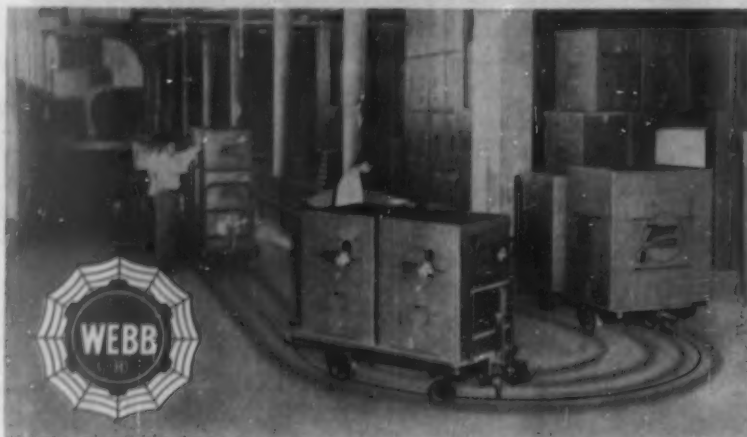
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A TOWVEYOR THAT RUNS FROM FLOOR TO FLOOR?

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The Towveyor system consists of a motor driven endless chain that travels in a trough in the floor. Material is carried on 750 tow trucks. Each truck is equipped with a tow pin which is manually lowered into a narrow continuous slot in the floor to engage the Towveyor chain. Trucks are disengaged from chain by raising tow pin. Tow pin is spring locked in the up position and locked in a slot in the down position for positive safety on both flat and ramp travel of tow trucks.

This efficient Towveyor system coordinates delivery of picture tubes, component parts and even corrugated cartons to their proper stations. Maximum daily capacity of system is 10,000 cabinets delivered to warehouse and 10,000 finished sets to shipping.

Webb engineering ingenuity and design experience can also provide a better answer to your materials handling problems. Up and down, and all around your plant, Webb conveyors engineered to your specific needs are best.

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frozen and canned seafoods under the Carnation label.

Carnation, of course, is already a big name in milk products and other food lines.

A complicated situation brings its name into the frozen seafood field. Another concern, Griffith-Durney Co., of Los Angeles, had been using the Carnation name since the 1890s, mainly on canned salmon. Apparently, as the two companies expanded their products, their interest in the name collided. Several years ago, they reached an agreement on the co-use of the name. Griffith-Durney sold its rights to Carnation, which in turn licensed William W. Durney, grandson of Griffith-Durney's founder, to pack seafoods under the Carnation label. Durney may also license other packers. Carnation has the right to inspect plants and products to insure quality.

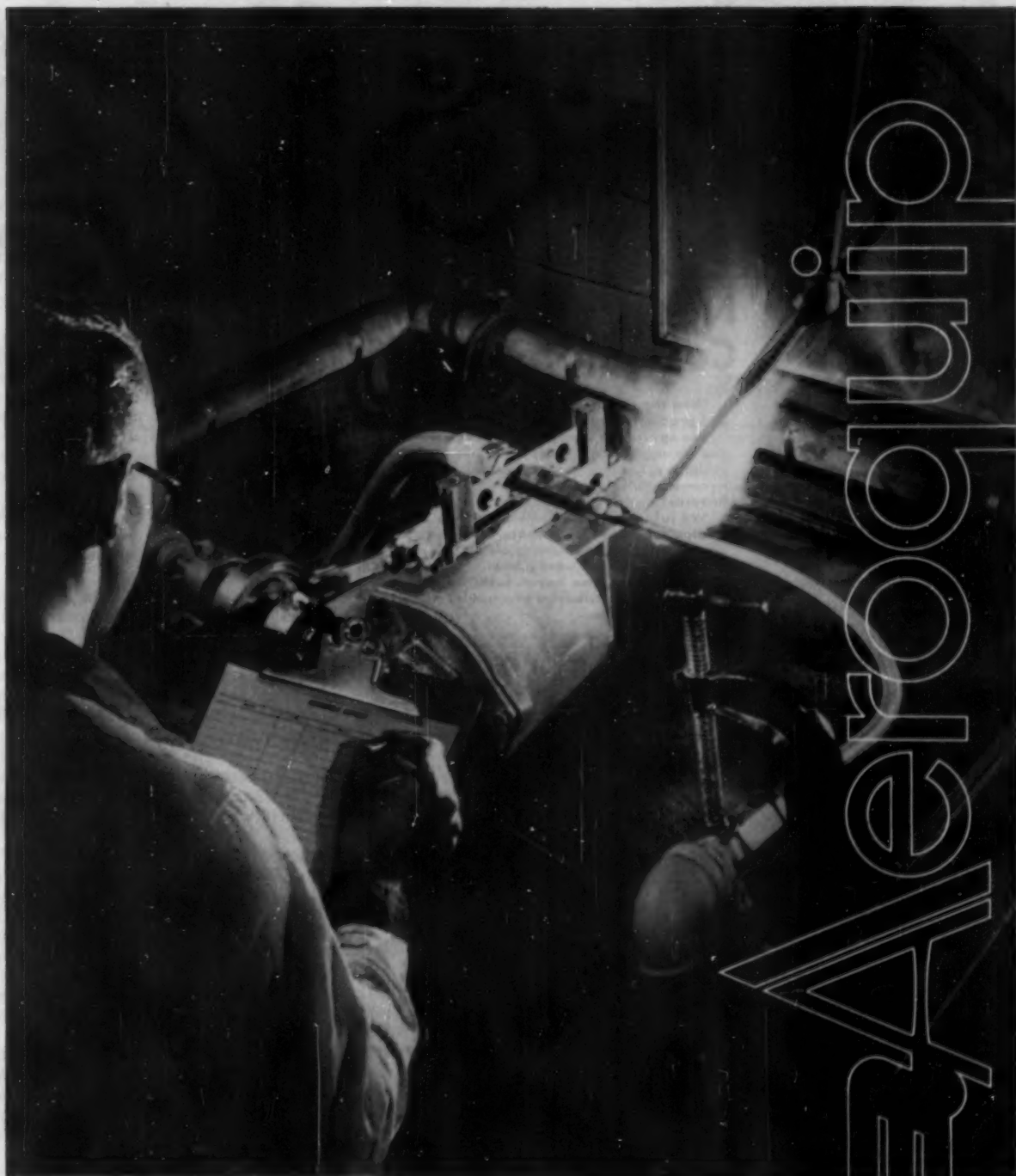
Durney called on Jaxon O. Hice, former president of SeaPak Corp., to handle the entire operation. As president of Aquafoods, Hice aims to sign up perhaps 30 seafood processors to turn out a broad Carnation line of seafood products.

Hice's sales goal for the first year is \$50-million. Consumption of frozen seafood has been rising—thanks in large part to frozen fish sticks (BW—Feb.19'55,p193). But per capita consumption has stuck at about 3½ lb. for the past four years, according to rough estimates by U. S. Fish & Wild Life Service; consumption of all seafood has held at close to 11 lb. Hice believes that a well known brand, covering a wide line, sold on quality, not price, can boost that figure.

• • •

Justice Dept. O.K.'s Appliance Merger

RCA-Seeger-Whirlpool appliance merger (BW—Jul.23'55,p52) has been given the nod by Asst. Atty. Gen. Stanley N. Barnes, who says the Justice Dept. will "not institute action" if the plan goes through. One factor was assurance from Radio Corp. of America (a part owner of the new venture) that it won't use Whirlpool-Seeger Corp. to sell RCA television, radio, or phonographic equipment to Sears, Roebuck & Co., which through ownership in Whirlpool will also be a major stockholder.



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Orange Juice is Concentrated with Frick Reversed Refrigeration at 1/10th the Cost of Steam.



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Look up National Truck Leasing System in your local phone book, or write for "How Leasing Helps Your Financial Statement" and a listing of NTLS Companies in brochure No. 8-4

LEASE
your trucks

New Beer Label

Anheuser-Busch is switching names for its popular-priced brew. Aim: to recover lost markets.

The problems that beset the big national brewers were highlighted last week with the news that Anheuser-Busch, Inc., would introduce a new popular-priced beer called Busch Bavarian.

In a sense, Anheuser-Busch is introducing only a new name. The St. Louis brewer already has a popular-priced beer on the market called Busch Lager, which came on the market only a few months ago (BW—Mar. 26 '55, p. 54). The Busch Lager label will presumably be scratched when the new label comes in.

• **Over a Barrel**—Here is the background for what at first glance seems to be a rather confusing piece of strategy:

The national brewers' troubles started back in 1953 when they raised the price of their premium beers. This gave local brewers a chance to compete on price and to get back some of the market they had lost to the premium beers (BW—Jul. 24 '55, p. 52). In retaliation, Anheuser first cut the price of its Budweiser beer, then introduced its less costly product.

But the local competition, plus other difficulties, still has the national brewers over a barrel. Anheuser's net sales for the first half of this year were \$101.7-million, compared with \$109.9-million last year for the same period. At one point, earlier this year, Anheuser admittedly lost the No. 1 spot in the industry to rival Jos. Schlitz Brewing Co.

Anheuser's earnings for the first half of 1955 were \$4.6-million, compared with \$6.8-million last year.

• **All-Out Promotion**—Just how successful Busch Lager has been, the company won't say. But one official comments that sales were satisfactory, considering the amount and type of promotion given the beer.

Anheuser promises all-out merchandising and promotion of the new Busch Bavarian beer. The company has picked a new agency, Gardner Advertising Co. of St. Louis, to handle the account. A new division has been set up to sell the new beer in competition with the company's premium priced Budweiser Lager.

This may have a bearing on the name change. Observers figure that the Busch Lager name gave the impression that the new beer was just a cheaper version of Budweiser Lager. **END**

HOW LONG DO YOUR MUFFLERS LAST?

Road tests show that mufflers made of **ALUMINIZED STEEL** outlast ordinary steel mufflers at least 2 to 1

Here's dramatic proof you can slash muffler costs with an Armco Steel that resists heat and corrosion combined.

In actual road tests on 152 private cars, less than 5% of mufflers made of Armco ALUMINIZED STEEL® failed within 24 months. The average life of these mufflers was more than twice that of the ordinary carbon steel mufflers they replaced. Reports from fleet owners indicate the same superiority for truck mufflers made of this special steel.

The need for more durable mufflers was stressed by fleet owners in a survey conducted by Fleet Owner magazine, which included 36,685 trucks and truck tractors. The survey showed that more than 80% of all ordinary steel truck mufflers failed within 24 months.

Armco ALUMINIZED is made by coating a strong steel base on both sides with molten aluminum. Leading manufacturers of truck and auto mufflers use this special steel to assure greater value in longer lasting mufflers.

For more information, just fill in and mail the coupon.



When this picture was taken, the mileage on this ALUMINIZED STEEL truck muffler was 90,856. Most mufflers made of ALUMINIZED last more than 125,000 miles in diesel truck and tractor service. Many exceed the 175,000-mile mark.

ARMCO STEEL CORPORATION, 495 Curtis St., Middletown, Ohio

Where can we get mufflers made of ALUMINIZED STEEL for

☐ trucks ☐ autos

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

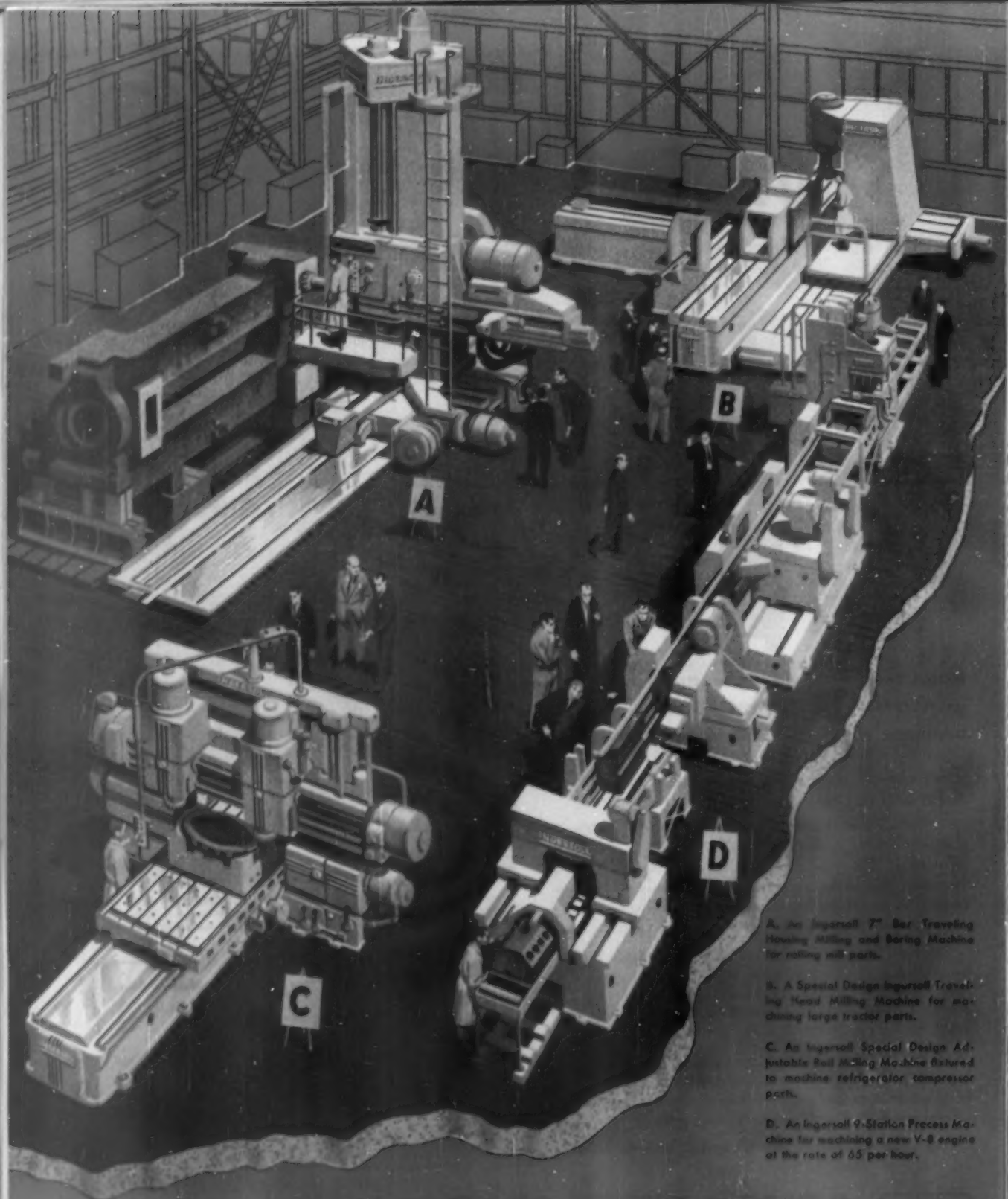


ARMCO STEEL CORPORATION

MIDDLETOWN, OHIO

SPECIAL STEELS

SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



A. An Ingersoll 7' Bar Traveling
Honing Milling and Boring Machine
for rolling mill parts.

B. A Special Design Ingersoll Travel-
ing Head Milling Machine for ma-
chine large tractor parts.

C. An Ingersoll Special Design Ad-
justable Rail Milling Machine fixed
to machine refrigerator compressor
parts.

D. An Ingersoll 9-Station Process Ma-
chine for machining a new V-8 engine
at the rate of 65 per hour.

INGE

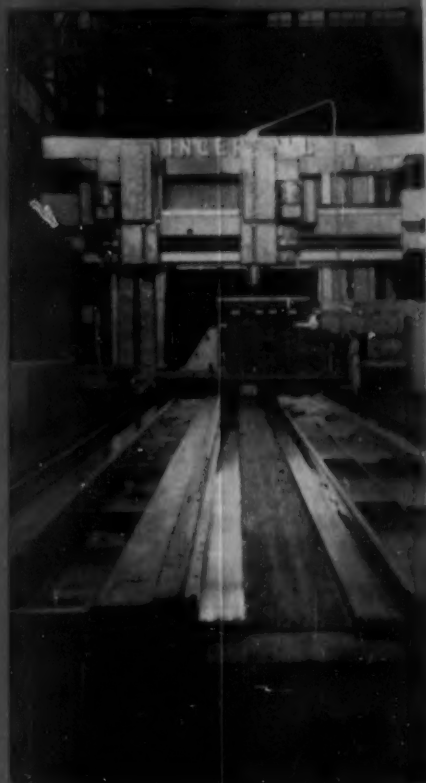
Invitation to visit **INGERSOLL**

No Ingersoll machines will be displayed at the Machine Tool Show in September. During September, however, we will be testing eight large machines on our assembly floors—including four adjustable rail milling machines ranging in horsepower from 30 to 100. Our customers will use them for machining refrigeration compressor parts, automobile body dies, and machine tool frames.

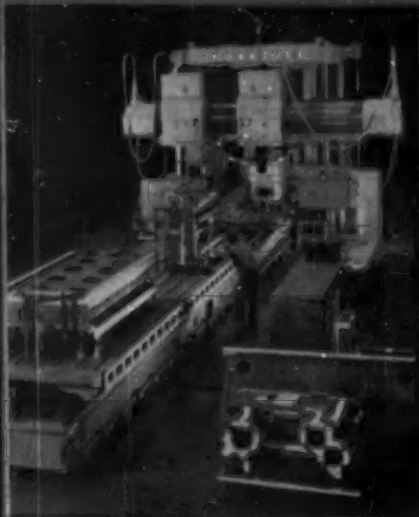
We will also be testing a 9-station process machine for the first operations on an automobile cylinder block; a special single station machine for tractor frames; a special vertical spindle milling machine for small die work; and a large 7" bar traveling housing milling and boring machine for machining rolling mill parts.

The sketches at the left represent four of these new machines. If you would like to see any particular one, our representative will be glad to assist you in getting to Rockford when it is running.

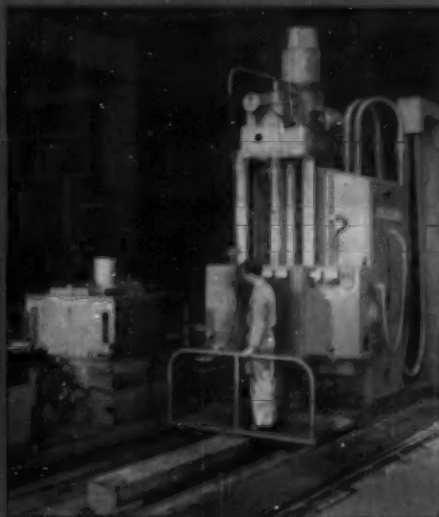
Our own machine shop will be working day and night during September on parts for machines we will ship during November and December. The photos at the right show four recent additions to our heavy milling department. We would like to have you see these machines under production conditions.



A 1,150,000 pound Ingersoll Adjustable Rail Milling Machine with 450 total connected horsepower—the largest milling machine in the world.



The latest design Ingersoll Adjustable Rail Milling Machine for medium size work—capable of delivering 100 H.P. to any spindle.



An Ingersoll Special Design Horizontal Spindle Milling Machine with two indexing work tables—one equipped with magnetic fixtures.



An Ingersoll 8" Bar Opener Machine specially designed for heavy milling and accurate boring on our own machine parts.

RSOLL

THE INGERSOLL MILLING MACHINE COMPANY ROCKFORD, ILL.



PRESIDENT Yasutaro Niizeki, who made his way up through the ranks of the prewar company to just under Occupation purge level, guides the new combine.

In Japan, a new trading power is rising phoenix-like out of the ashes of an old empire. Daiichi Bussan Kaisha, principal successor to the giant Mitsui that was decartelized during the U.S. Occupation, is beginning to remold the survivors into a semblance of their prewar ancestor.

Mitsui Rebuilds Its Old

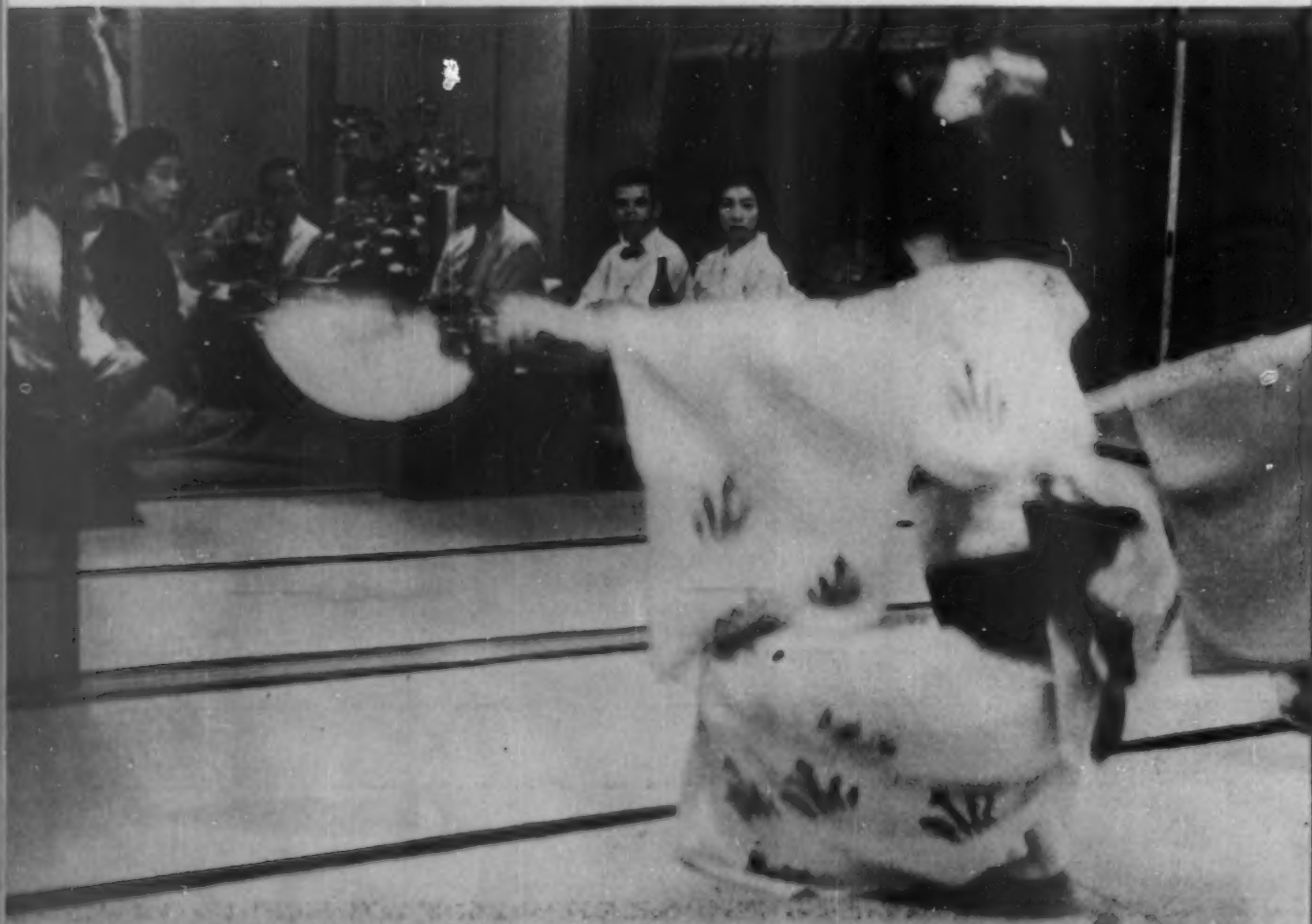
This weekend, announcements have gone out to stockholders of Tokyo's Daiichi Bussan Kaisha, Japan's largest trading company, calling them to a meeting later this month to approve a new name for the firm: Shin (New) Mitsui Bussan Kaisha. The new name, to be known abroad simply as Mitsui Trading Co., expresses the new character of the company since its merger last month with two other former remnants of the giant prewar Mitsui combine.

The new Daiichi Bussan trades in 30

countries. It handles more than 1,000 products for export, and imports more than 400 products. The company also controls 40 small industrial corporations in Japan and has the strongest, if unofficial, relations with the vast manufacturing enterprises that, prewar, were part of Mitsui.

• **Forerunner**—Last month's merger probably is the first of several. Current negotiations may bring four more former Mitsui trading companies back into the fold within the next two years.

These mergers are part of a general



GEISHA PARTY, traditional background for Japanese business conferences, is a Mitsui method of selling visiting Australian buyers. A typical party may cost more than \$600, Daiichi Bussan president's monthly salary.

Combine

post-Occupation trend in Japan back to prewar methods of doing business especially in the field of foreign trade (BW-Feb.12'55,p168). The Japanese government has given business a green light. In fact, it has just rescinded most of the anti-monopoly legislation enacted under the U.S. Occupation. Tokyo feels that Japan can regain its foothold in world commerce only through the operations of larger companies.

Daiichi Bussan's recent merger was a good move "not only for the company but for Japan," says Yasutaro Niizeki,



RAW SILK at Yokohama: Mitsui introduced silkworm to Japan from Italy. →





1615

Mitsui Takefushi

quits nobility,
enters commerce

1683

Banking begins at Yedo

1772

Mitsui Code

establishes principle of clan loyalty



1859

First trading company

organized after
Adm. Perry arrives (1853)

1867

Mikado's power restored,
financed by Mitsui family fortune



1873

"The great reform"
as Mitsui modernizes,
establishes bank

1888

Mitsui acquires Miike coal,
founds its industrial empire

1892

Japanese depression
almost bankrupts Mitsui interests

1904

Mitsui leaves retailing,
concentrates in other fields

1915

Mitsui in war work
— invests in U. S. aircraft

1932

Government scandals
involve Mitsui

1932-36

Japanese trade expands
with Mitsui
world's largest trader



1936

Militarists take over,
Mitsui knuckles under

1947

U. S. Occupation
breaks up cartels including Mitsui



1955

New Mitsui arises
as companies recombine.

president of Daiichi Bussan (page 63).
"We need cooperation rather than
competition among ourselves if this
country is to grow strong again."

"Cooperation" was also the keynote
of the prewar Mitsui combine (left).
It was controlled by 11 fabulously
wealthy families who worked together
through ownership of 90% of the stock
in 22 subsidiaries and 273 affiliated
companies. Its empire controlled 18%
of Japan's prewar foreign trade and an
even greater percentage of domestic
commerce.

• **Target**—This empire was a prime target
of Occupation decartelizers. In
1947, it was splintered into hundreds
of pieces. The trading sector of the
empire, Mitsui Bussan Kaisha, was
broken up in the process. What hap-
pened last month was that three big
segments of the former trading com-
pany got back together. It looked like
the first step in the re-creation of a
Mitsui company, not like the old one,
but still one of the most impor-
tant components of the Japanese econ-
omy.

• **Why Merger**—There are several fac-
tors behind the merger—all of them the
result of conditions in the postwar Ja-
panese economy:

• An extreme shortage of working
capital, and the reluctance of Japan's
banks to extend credit to manufacturers.

• The inexperience of manufactur-
ers in marketing at home and abroad,
which has led them back to trading
companies.

• A general reaction to the Occu-
pation and the fragmentation of Japan-
ese industry that occurred under it.

• **Pinch**—The Japanese have no doubts
that this reconcentration of industry
will increase the country's efficiency in
world markets. If they are right, U. S.
exporters and manufacturers soon may
feel the pinch of increasing Japanese
competition.

Some U. S. officials, fear that the
possible effects of the regrouping of
Japanese industry along prewar lines
will endanger Japan's feeble parliament-
ary government. But there is little
evidence today that the new Daiichi
Bussan can ever become what the pre-
war Mitsui combine was.

• **Postwar Split**—When the Occupation
dissolved the Mitsui combine and other
Japanese family cartels (called zaibatsu),
departments and branches of the old
combines found themselves floundering
for survival. Mitsui's trading company,
Mitsui Bussan Kaisha, was split up into
180 companies.

One of these splinters was Daiichi
Bussan Kaisha, literally "First Trading
Company," and it is the nucleus of the
present merger efforts. The company
had almost no capital except what
Niizeki, an old Mitsui employee who
had worked himself up through the

ranks, was able to borrow through per-
sonal connections.

But by 1950, Daiichi Bussan had
absorbed a number of ex-Mitsui firms
and had a paid-up capital of \$200,000,
more than twice that of any other ex-
Mitsui competitor. In 1951, the com-
pany was able to get more capital in
Japan and also from the U. S. Harold
L. Bache of Bache & Co., New York,
and Robert Lehman of Lehman Bros.,
led 24 U. S. investors in putting \$140,-
000 into Daiichi Bussan. This gave the
American group 25% of the company's
total stock.

As the Korean War gave a boost to
the whole Japanese economy, Daiichi
Bussan continued to prosper. At the
same time, government policy helped it
along. From 1950, Tokyo tended less
and less to observe the letter or the
spirit of the antimonopoly law drawn
up under the Occupation.

In August last year, a revision of the
law made mergers and restrictive price
agreements legal. Immediately, Daiichi
Bussan began negotiations with two
large former Mitsui companies for a
merger.

• **Pressure**—The merger was speeded by
two things: One of the companies,
Daiichi Tsusho, was in sad economic
straits and its bank creditors were pres-
sing it to merge. What's more, all the
Mitsui companies were facing increas-
ing internal competition in Japan.
Mitsubishi Shoji, a descendant of one
of the two most powerful prewar Ja-
panese zaibatsu, organized a similar mer-
ger last year.

Because of its size, the merged Mit-
sui company is now entitled to receive
loans from the government's Bank of
Japan at low interest rates. But the
new company is not so healthy finan-
cially as first glance might indicate. At
present, 90% of its operating funds are
borrowed. It has no headquarters build-
ing. Its overseas staff is undermanned;
its 230 foreign employees are a fraction
of the prewar Mitsui trading company's
several thousands.

• **More Merger**—That might suggest
another infusion of U. S. capital. But
it's no secret that company officials
are not unhappy that the merger has
reduced the Bache group's holdings to
less than 10%.

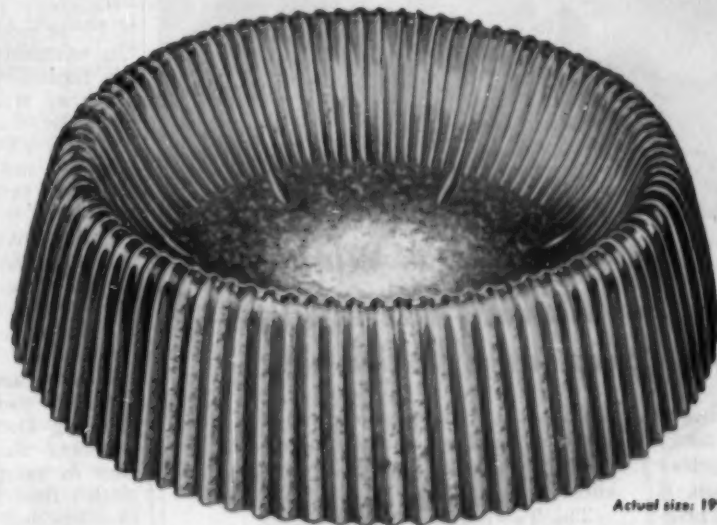
The answer to the capital problem,
Niizeki believes, is more mergers. He
hopes soon to bring in Mitsui Bussan
Kaichi—another splinter of the prewar
trading company that carries its name
and the most important ex-Mitsui
trader outside the merged companies
now.

"Sooner or later," Pres. Niizeki says
confidently, "many of the ex-Mitsui
companies will fall in with us. In any
case, it is our policy to permit a period
of digestion after we take a bite."

Because of Daiichi Bussan's wide

A CHALLENGE:

THE STRONGEST MADE BY ANY GALVANIZED SHEET—



Actual size: 19" O. D.

Anything that can be made of steel sheets

WITH a complicated reverse draw and tight corrugations, manufacturing this hog feeder could have been a problem. *But it wasn't.*

It is made of Wheeling SOFTITE, the galvanized sheet with the tightest zinc coating yet produced...so tight, in fact, that you can use it to make anything you can make of steel sheets.

That's SOFTITE...Wheeling SOFTITE...made by the company that led with the development of COP-R-LOY, the original copper-bearing steel pipe and perfected DUCTILLITE, the original cold reduced tin plate which revolutionized the tin plate industry, and opened new fields to the can maker and packer. Now, because of the unprecedented demand for SOFTITE Galvanized Sheets, Wheeling has been forced to triple its production facilities in 1955.

can be made of

**WHEELING
SOFTITE**

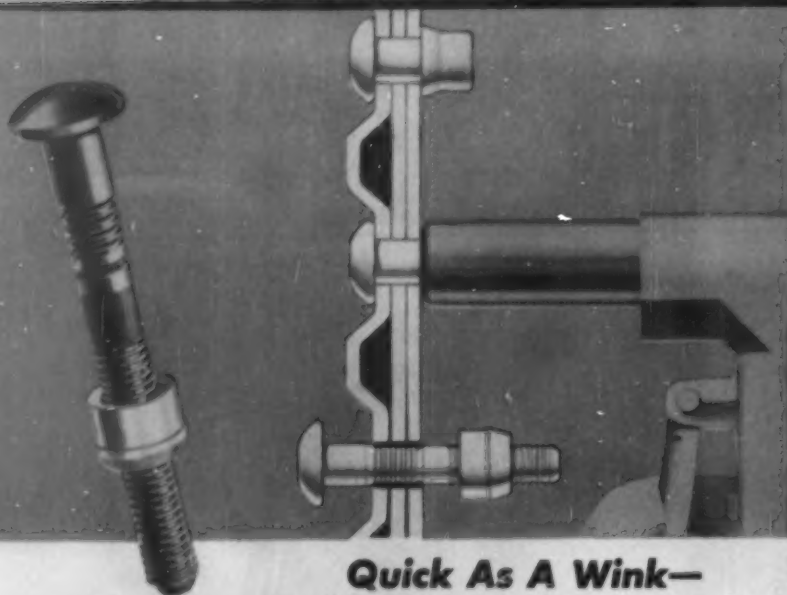
galvanized sheets!



IT'S WHEELING STEEL

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FIRST CAME **COP-R-LOY.** THEN *Ductillite* NOW WHEELING **SOFTITE**



Quick As A Wink— You Get Secure, Permanent Fastening With Townsend Lockbolts

In less than a second, with one squeeze of the trigger, a Townsend lockbolt pulls the work together with a high clinching action, is locked in place with uniform pressure. It is a quick method of producing tight, rigid, permanent fastenings that cannot loosen even under extreme vibration or shock conditions.

Townsend lockbolts combine the advantages of riveting and bolting—eliminate the disadvantages. Installation is fast—under certain conditions, one man will install 30 in only 60 seconds. Fewer workers will complete an assembly in less time than when riveting or bolting.

The clamping action, or clinch, of Townsend lockbolts is higher than rivets—is more uniform than bolts and nuts. The lockbolt fills

the hole better than other fasteners, thus making possible a more rigid joint and also providing an effective liquid seal.

The Townsend lockbolt consists of two precision-made parts—a pin and a collar. Locking grooves are provided on the pin into which the collar is swaged by the pneumatic gun. The pulling section of the pin breaks in tension at a predetermined point when the setting action is completed.

Townsend lockbolts are available in steel and aluminum alloy, in $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ " diameters, in grip lengths ranging up to 2", in various head styles. For information on how to speed production, get tight, secure, permanent fastening with Townsend lockbolts, use the coupon below.

Licensed under Huck patent nos.
RE 22,795; 2,114,493; 2,527,307; 2,531,048; 2,531,049.

THE FASTENING AUTHORITY
Townsend
COMPANY • ESTABLISHED 1916

NEW BRIGHTON, PENNSYLVANIA

Sales Offices in Principal Cities

Branch Stock Dealers • Local Sales Offices

TOWNSEND COMPANY
Sales Department
New Brighton, Pa.

Please send without obligation "Lockbolt" Bulletin
TL-101.

Name _____ Title _____
Company _____
Street _____
City _____ Zone _____ State _____

"... only one other Japanese trading firm comes close ..."

MITSUI starts on p. 62

diversification, that "digestion" may take some time. About 23% of the company's business is in foodstuffs, 21% in produce, 19% in metals, 11% in machinery, 11% in fertilizer, 5% in textiles, 4% in chemicals, 4% in sundries, and 2% in fuels.

Today, the company's total monthly turnover is \$56-million, 30% more than in 1954 and 90% over 1950. Of this business, 56% is done overseas.

The U.S. is Daiichi Bussan's best customer. We take 16% of its total exports, or more than double that shipped to any other country. The U.S. also heads Daiichi Bussan's import list; 38% of its overseas purchases are made in America.

• **Home Competition**—Only one other Japanese trading firm comes close to meeting Daiichi Bussan's volume of business, the new Mitsubishi Shoji. But its monthly transactions don't go higher than \$47-million—about \$9-million less than Daiichi Bussan. The two offsprings of the prewar combines are bitter competitors, however.

There are 2,000 small trading operations in Japan. Many are offshoots of the prewar trusts and many are "fly-by-night" operations. They are, says Daiichi Bussan's president, "cutthroat



AT THE TOP of the company is Kanoh Hironaka, chairman of the board and president of Nippon Machinery Co., one of the three firms that merged to form the new Daiichi Bussan Kaisha. The directors of Daiichi Bussan, like most Japanese companies, are all active members of management.

competitors out to make a quick killing before they get killed themselves." It is this competition that offers Niizeki and those in the government who think like him, their best argument for reconcentration of business into the hands of a few big companies. Only combines, they argue, can prevent these small firms from "dumping" and exporting goods of inferior quality, destroying Japanese markets abroad. And after all, they argue, isn't this aim of Mitsui the same as that of GATT to which Japan was admitted recently (BW-Jun.28'55,p180).

• **Credit Problem**—The fact is that, prewar, Japanese manufacturers had no experience in marketing. They sold their goods to trading companies, which extended credit to ultimate customers and which also extended credit to the manufacturers from banks belonging to the same zaibatsu.

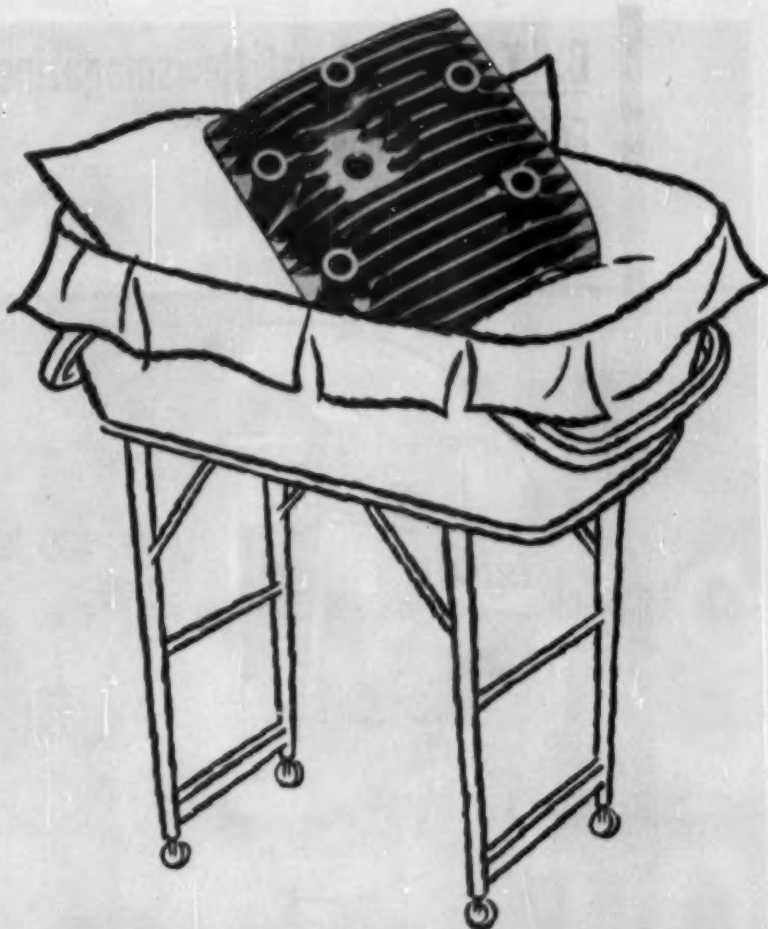
When the occupation destroyed the holding companies and split up the holdings of each zaibatsu, the banks no longer were willing to give credit to the manufacturers. So a manufacturer was forced to go back to dealing with the trading companies that control 90% of Japan's domestic as well as export markets. (Daiichi Bussan, for example, does 44% of its business in Japan.)

Perhaps even more important than these economic considerations, however is the tradition of Japanese marketing that hangs over the ex-cartel companies.

"American firms have nothing com-



MACHINERY sales expansion is the job of Shohzo Nagawawa, director of the new Daiichi Bussan's engineering department. A former vice-president of Nippon Machinery, his job is to prove that the new company can sell capital goods as well as the traditional consumer products of the Japanese trading companies.



This casting took a lot of pre-natal care

The success of a casting is often determined long before the metal is melted and the casting poured, because no matter how carefully casting is done nor how excellent the mold, a quality part cannot result unless quality metal is used.

Foundries and die-casters need ingots that will be alike in quality and characteristics from lot to lot, especially when castings of intricate character must be precisely cast in quantities. To assure such results, the Federated Metals Division of American Smelting and Refining Company employs the most modern quality control methods. Electronic testing devices and expert metallurgists check each heat poured from Federated's furnaces.

Both supporting and preceding quality control is Federated's modern Central Research Laboratory, which has developed alloys such as Castomatic® type metals and solders and Tenzaloy, the high strength aluminum alloy that ages without heat treatment.

Whatever you need in non-ferrous ingot metal, or in technical service to assure good non-ferrous castings, think of Federated first as your source of supply and technical information. Our broad experience with all kinds of non-ferrous metals has earned us our reputation as Headquarters for Non-Ferrous Metals.

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VISION, Inc.

60 West 55th Street, New York 19, N. Y.

"... Mitsui family cannot reclaim its former empire ..."

MITSUI starts on p. 62

parable to our zaibatsu ties," one Japanese company official says, "it is only natural for us to deal in a thousand-and-one products when there are so many diversified Mitsui manufacturing industries that feel closely bound to us." That means literally that any of the ex-Mitsui companies, bound for centuries to the Mitsui code (illustration, page 64), are obligated to aid by trading with other ex-Mitsui companies.

• **Cutting the Ties**—However bound traditionally the former Mitsui manufacturing companies are to one another, it's unlikely that they will ever reenter a Mitsui empire. Today the ex-Mitsui manufacturing firms are independent, and while they are willing to honor their traditional loyalty ties to the other ex-Mitsui companies, it's not likely they would give up their independence to a prewar-type holding company.

Furthermore as Japanese trade moves increasingly, particularly in its export business, toward capital rather than consumer goods, the manufacturing companies will be less dependent on the trading companies. And the manufacturers cannot, at least at present, look toward the trading companies for large amounts of capital or credit.

The Mitsui family itself, for generations not actively involved in the business, cannot reclaim its former empire. An Occupation capital-levy cut its multimillion-dollar fortunes back to relatively small amounts of capital, not enough to collect and buy up the widely held shares of the manufacturing firms that were placed on public sale when the holding companies were abolished.

The Mitsui Bank, another segment of the empire, theoretically might become all-important because of its control of credit. But it's of less importance because of its weak financial position. It ranks ninth among Japanese banks on value of deposits and sixth in value of loans. The postwar period has also seen much crossing of old zaibatsu lines for credit—for example, Daiichi Bussan has only 17% of its borrowed capital from Mitsui Bank.

Another brake on the re-creation of the prewar Mitsui setup: the personal ambitions of hundreds of managing directors of the former Mitsui companies. The title of "managing director," a Japanese company top executive, carries tremendous social prestige. Today's managing directors will fight any move that returns them to a minor position in a larger company. **END**



One Lady's Afternoon Stroll

This young lady, Josephine Berosini, is giving an excellent demonstration of how to walk above the crowd. She does it every afternoon and again at night. A star of the Ringling Brothers-Barnum & Bailey circus, she chooses a route that leads up a steeply pitched cable to the top of the tent—and with no net beneath. Later, when she has finished her act on another taut line, she walks down the first one as coolly as most of us loaf down Main Street.

The cables on which she performs are sturdy wire ropes, all made of steel. So are the guy lines that brace the equipment at various points. The steel rope supporting her in the picture is wound with a layer of tape to provide additional traction.

This is but one of the many uses for Bethlehem wire rope in The Greatest Show on Earth. Wire rope holds in place the tremendous center poles, key to the rigging of the tent. And of course

it is essential in the actual raising of the Big Top—a fascinating job to watch. Moreover, it is used in trapeze apparatus, and in tight- and slack-wire acts.

You'll find lots of Bethlehem wire rope in the circus, just as you'll find it in mining, construction, petroleum, logging, manufacturing, and other industries. Bethlehem's tough steel rope is a product so widely used that one distributor alone has sold enough of it to girdle the globe several times.

BETHLEHEM STEEL



In Business Abroad

Airlines Reach Partial Agreement

In Hassle Over Latin American Run

The U. S. flag carriers' wrangle over the Latin American route may have leveled off at high altitudes for a while. Last week, National Airlines, Pan American World Airways, and Pan American-Grace Airways announced an agreement for an interchange of equipment on the New York-Miami-Latin American run. Passengers now can ride the same aircraft from New York over National's route to Miami, then Pan American's route to Panama, and Panagra's route from Panama into South America.

Eastern Air Lines and Braniff Airways worked out a similar plan earlier this year. It's taken five years of negotiations, litigation, government edict, and White House diplomacy to reach these agreements. The Civil Aeronautics Board wants the accords as a way of giving more efficient and competitive service on the route.

What has complicated the situation is the hassle that has gone on periodically since Pan American and W. R. Grace & Co. organized Panagra in 1929. Both own 50% of the stock, with management largely in the hands of the Grace interests but with operations often dependent on Pan Am's worldwide system.

When CAB ordered the interline agreements, both Pan Am and Panagra attempted to reach separate settlements with National. CAB then stepped in to require a deal that would include all three.

While this settlement gives a respite, it by no means ends the dispute.

Hanging over the whole situation is a Justice Dept. antitrust suit against Pan Am, Grace, and Panagra, which seeks to divest both Grace and Pan Am of their Panagra interests. Justice would like to see Panagra as a completely independent airline.

There has been some talk of a settlement of the suit. But it doesn't seem likely that either Pan Am or Grace will give up its interests in Panagra without a last-ditch fight.

• • •

New York Bank

Caters to Foreign Trade

The Guaranty Trust Co. of New York plans to make it easier for foreigners to own stocks in U. S. corporations. The device: depositary receipts, already used by U. S. residents holding shares in foreign companies (BW—Jun. 4 '55, p. 130). In effect, the plan is almost the reverse of the American Depositary Receipt system pioneered by Guaranty 30 years ago.

The bank will hold on deposit in New York stock certificates bought by brokers for foreigners; it will not buy or sell them. Then it will issue Bearer Depositary Receipts—with dividend coupons—to the foreign owner. When a dividend is declared, the money will be received

by Guaranty, and the owner notified that he can draw the funds if he presents a coupon.

The system of bearer shares—as opposed to shares registered by name—is common in Europe, where stock owners often would as soon not disclose their identity.

• • •

Coal Famine in Germany

Gives U. S. Mines a Boost

There's good news for the U. S. coal industry—which already has had more than it expected (BW—Feb. 26 '55, p. 28): West Germany probably will double its coal imports from the U. S. during the rest of the year.

Despite pooh-poohing from Bonn officials, there is something of a "coal famine" in booming Germany. Customers in the Ruhr already are being limited to purchases equal to what they bought last year. Special exemptions are given industrial sectors whose production index has climbed way ahead of the rest of industry.

Coal production in Germany, is up to 119.2 (100=1936). But that's no match for the industrial index as a whole, which has risen to 209.2. This year, Germans will be forced to import about 12-million tons, about half of it from the U. S.

• • •

New \$50-Million Expansion Set

By GM in Australia

Australia's General Motors Holden, Ltd., the GM subsidiary "Down Under," has just announced another \$50-million expansion. It's on top of \$17-million announced less than a year ago (BW—Apr. 23 '55, p. 126). Reason for the expansion: GM Holden has a backlog of orders for 12 months with the present 65,000 car annual production. The company is aiming at 100,000 per annum by 1958.

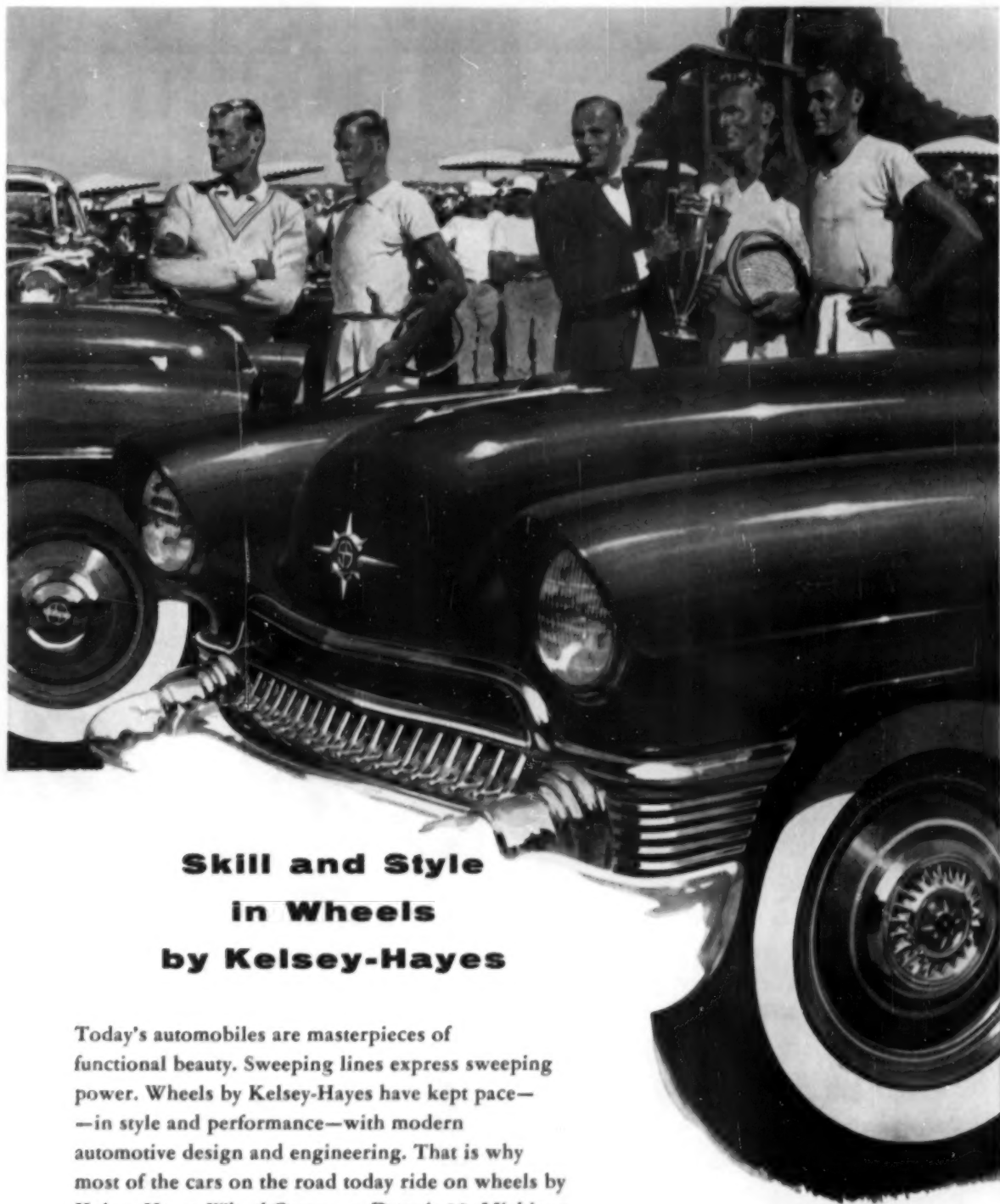
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Business Abroad Briefs

Bank of America (International), wholly owned subsidiary of the California institution, will open a Paris branch this fall with two additional agencies north of the French capital servicing U. S. troops.

The Landrum Mills Hotel Corp., backed by interests already associated with the Commonwealth Extrusion Corp., will build a new 200-room, \$4.4-million hotel in San Juan in collaboration with the Commonwealth's Industrial Development Co. . . . A 35-year lease on Havana's plush Hotel Nacional has been sold by the Kirkeby chain to a Cuban subsidiary of Pan Am's Intercontinental Hotel Corp., reportedly for \$3.8-million.

The World Bank (BW—Jun. 25 '55, p. 144) has reported a net income of \$24.7-million for the fiscal year ending June 30, 1955. . . . The World Bank's new \$18.2-million loan to Guatemala will allow that country's anti-Communist regime to get on with the public works program started under the previous Communist-line government.



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Cut cabinet

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PRE-FINISHED SHEETS ARRIVE
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AS NEEDED, CABINETS ARE
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ONE COMPANY REPORTS that completed cabinets made of Sullvyne-Clad cost $\frac{1}{3}$ less upon delivery to their assembly line than the cabinets which they previously used.

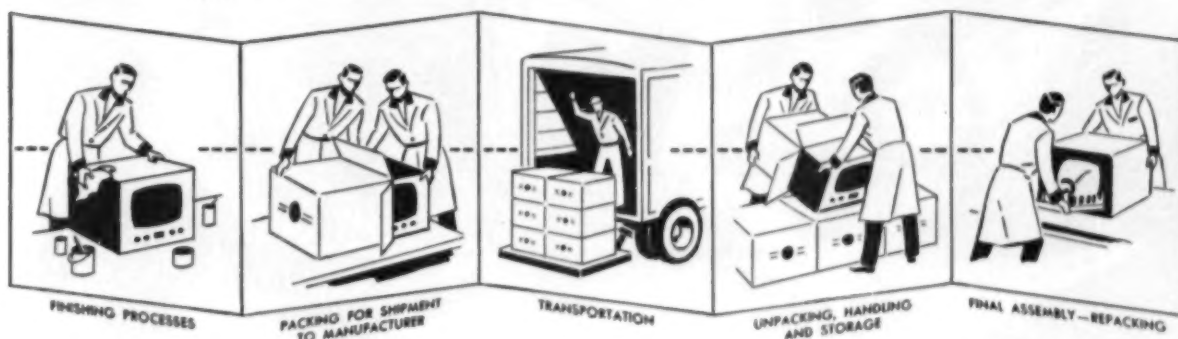
Sullvyne-Clad Metal Laminate simplifies cabinet production to a point where cabinets can be readily made at your own assembly line. Tooling costs are small as compared with other conventional processes and there are tremendous savings in freight, handling,

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- ★ Heavy investment in keeping "pipeline" filled
- ★ Thousands of feet of manufacturing and warehouse space
- ★ Expensive finishing costs

120". It may be stamped, punched, crimped, deep-drawn or bent up to 180° without damaging the vinyl or breaking the bond.

Sullvyne-Clad slashes service costs, too. It gives you an unequalled finish many times thicker than any conventional coating—.012" to .030". It has positive resistance to abrasion and corrosion; won't chip, crack or craze. Sullvyne-Clad is available in a wide selection of colors, patterns and embossings. Free samples will be sent on request.

Actual photograph of Sullvyne-Clad sheets in Blonde Mahogany and Buffalo Grain, Ginger.

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In Washington

• • •

Action on the Antitrust Front Continues at a High Level

Despite the adjournment of Congress, there has been no lull on the antitrust front. Among the latest developments are these:

- Congressional investigators were trying to find out whether anyone in the Administration had applied any pressure toward getting the antitrust suit against Pan American World Airways and W. R. Grace & Co. dropped. The two companies jointly own Panagra, the airline that flies to the West Coast of South America (page 70). Antitrust chief Stanley N. Barnes testified before a Congressional committee that Sherman Adams, Assistant to the President, called about the case, but denied Adams pressured him to drop the suit, which seeks to have the line sold to some outfit not connected either with another airline or shipping line. Rep. Emanuel Celler (D-N. Y.) said that Charles Willis, who served as an assistant to Adams, went to work for Grace about the time the phone calls were made.

- Antitrust hearings conducted by Sen. Harley Kilgore (D-W. Va.) get under way again Aug. 23, when his special committee starts probing into current distribution practices. This topic will occupy the committee until Labor Day. Next month, Kilgore will take up antitrust aspects of foreign trade.

By October, Kilgore's staff expects to be set to go with another hearing: a case study of General Motors Corp.—how it grew and what it's doing to industry.

- Antitrust chief Barnes has been taking a firm stand on business executives serving "without compensation," either as administrators or advisers; and Atty. General Herbert Brownell has so far backed Barnes solidly. Barnes complained about Wocs last spring—and told Rep. Celler he was studying several proposals that would eliminate any possibility of antitrust violations. Barnes says 250 of a thousand or more industry advisory committees on which Wocs are serving are not complying with current regulations.

- Federal Trade Commission Chmn. Edward F. Howrey will bow out to go back to his lucrative law practice, according to Washington sources. He's got about five years to go on his seven-year term. Theory is that he has reorganized FTC so it no longer retains its Democratic mold, which was the big reason he took the job.

• • •

Fast Tax Writeoffs Will Continue, But For Fewer Types of Plants

The Administration has just about made up its mind on the future of accelerated tax amortization (BW—Jul. 16/55,p27). The fast tax writeoff program will be con-

tinued—but only for about 10 types of plants. The official decision is expected this month.

Right now, mobilization officials are talking about classifying the 80-odd industry expansion goals that still qualify for rapid amortization into three categories—"direct defense" (like production facilities for military procurement), "direct defense-supporting" (like power facilities for military and defense needs), and "defense related."

Officials figure that from six to 12 of the existing goals will fit into the first two categories. These will continue to rate fast writeoffs. The third category is more fuzzy and will stir up much fuss. Plant expansions that do not fall in the first two categories will fall here. These goals likely will be suspended until completion of a full-scale review of supply-requirements estimates, then closed for the most part.

For many products, all this is academic. The fast tax writeoff has proven an inadequate lure for the amount of private expansion the mobilizers seek.

But for industries like aluminum, steel, and railroad equipment, classification as "direct defense-supporting" or just "defense-related" will be important. It will determine whether or not they get a five-year writeoff.

• • •

Government Doles Out Some Copper, With Further Releases Unlikely

No more government help on copper is in sight, government officials say after parceling out—to defense contractors only—5,750 tons that otherwise would have gone to the stockpile.

Only companies with defense-rated orders, under the defense materials system, get a crack at the scarce metal. Next government step could be release of copper actually impounded in the strategic stockpile—something that isn't very likely. Labor Secy. Mitchell successfully has opposed such a move, backed by Commerce Secy. Weeks.

Reason: This could be construed as government aid to copper companies, in their differences with the union, which counts on the economic pressure of the shortage to force a settlement.

• • •

Shell Oil Comes Up With Solution To Discrimination Problem

Shell Oil Co. and the CIO oil union are being held up as a model for companies worried about losing government contracts because of complaints about discrimination in hiring and promoting Negro employees.

Shell, at its Deer Park (Tex.) refinery, is eliminating its "two pool" system under which Negroes—classified in one employee category—were ineligible for promotion.

Now all employees are eligible for advancement to skilled jobs providing they have at least a high school education—something Shell has required for years. This



EYE SHOCK

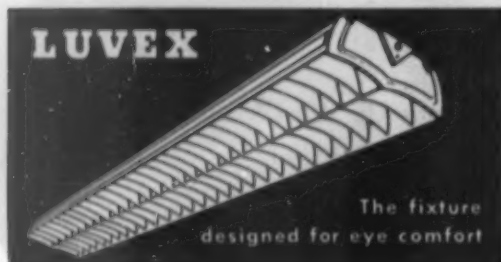


EYE COMFORT

Reduce Brightness Contrasts Change Eye Shock to Eye Comfort

Eye shock in business is a modified form of eye shock experienced in night driving. There's one difference—eye shock in business is often present 8 hours a day, while night-driving eye shock is intermittent. Eye comfort is of first importance

in the design of Day-Brite Luvex lighting fixtures. They are engineered to utilize both *upward* and *downward* lighting—to "wash out" the effects of brightness contrasts—to banish discomfort by banishing ceiling gloom. This results in a bonus in morale and efficiency.



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requirement, officials believe, means gradual advancement of Negroes.

All sides—company, government, union, and workers—are said to go along with the new policy.

• • •

ODM Looks to Oil Importers For Help on Policy Question

Office of Defense Mobilization is looking to oil importers for a tipoff on what the government should do about restricting oil imports—if anything.

ODM boss Flemming has asked them for figures on imports. Replies will help settle one argument: whether oil imports are increasing or not. One group says it's citing a 14% increase in the first half of this year over first half of 1954; other companies say the increase is only 1%, when you compare imports to current level of domestic production.

The government has been under tremendous pressure from domestic oil producers to hold down imports, and from our allies to keep open the U. S. market.

• • •

Two Utility Groups Get Nod From AEC on Nuclear Plants

Two utility groups have approval of the Atomic Energy Commission for construction of nuclear-fueled power plants. Two other applicants have been turned down.

The AEC this week approved the proposal of the Detroit Edison Co. and associates to construct a fast breeder reactor for a 100,000-kw. plant in the Detroit service area by 1959. Also O.K.'d is the boiling water reactor plan of Commonwealth Edison of Chicago and associated companies, for a 180,000-kw. plant to be built near Chicago by 1960.

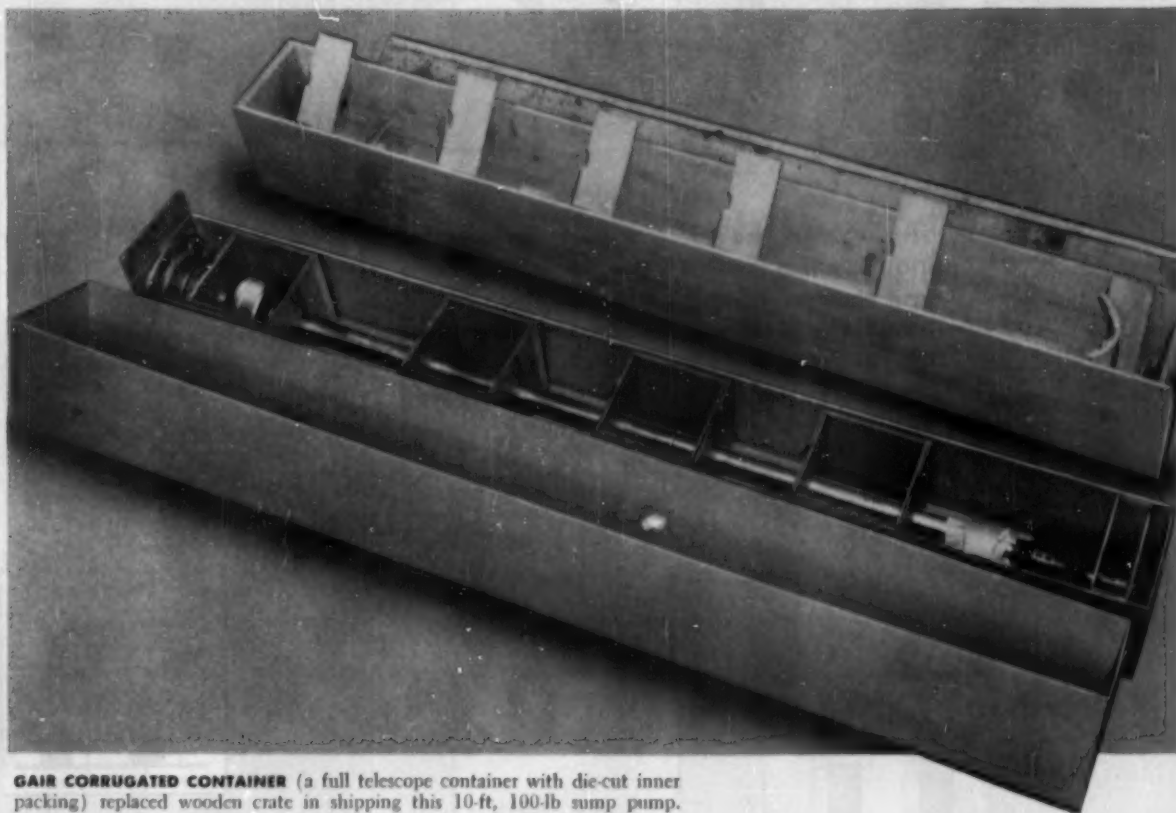
Consumers Public Power District of Nebraska and the Yankee Atomic Electric Power Co. were turned down. AEC says the applications can still be reconsidered.

Detroit Edison and Commonwealth will get fissionable material from AEC to run their plants for seven years, paying only for fuel consumed.

Switching

FROM WOOD TO CORRUGATED

SAVES PUMP FIRM \$4.50 A SHIPPING CONTAINER



GAIR CORRUGATED CONTAINER (a full telescope container with die-cut inner packing) replaced wooden crate in shipping this 10-ft, 100-lb sump pump.

Production men at Detroit's Penberthy Injector Co. are wearing big smiles since they switched from wooden crates to Gair corrugated shipping containers.

Product involved was their ten-foot sump pump that tips the scales at more than 100 pounds. That's why Penberthy's shipping department wasn't sure at first that corrugated was strong enough for the job. Gair convinced them by a number of test shipments to various parts of the country — *no damage!*

Now one man packs thirteen complete containers

an hour — it used to take two men that long to turn out nine to ten containers. This represents a savings in packing and materials of \$4.50 per unit. Add the fact that the new container is 42 pounds lighter — three of them can be shipped for the price of two wooden crates — and you see why Penberthy has closed down its crating shop.

Interested in knowing what suggestions we might have for improving your packing and shipping program? Call your nearest Gair plant.

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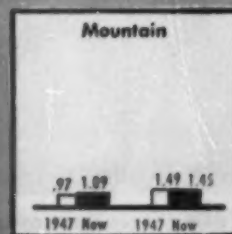
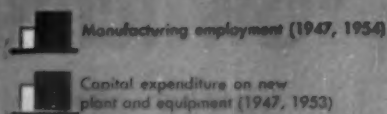
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SPECIAL REPORT

What's Happening to the Face Of the U.S. Industrial Map

Throughout the postwar period American industry has been on the move. As more and more companies expand into new areas, the whole industrial face of the U.S. is changing. The map on the right shows how the migration has accelerated in just the past seven years.

Percent of U.S. total



Data: McGraw-Hill Department of Economics

Great Lakes Leads the Pack, But

The map above shows the effects of seven years of restlessness by American industry. Two things about it are significant—and, to a degree, surprising:

- Industry is continuing to move from the manufacturing cores of the East and Midwest to the newer, booming centers of the South and West.

- The rate of migration has not slackened at all from the days when the World War II dispersion program began dramatically to remake the industrial face of the U.S.

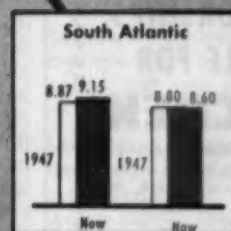
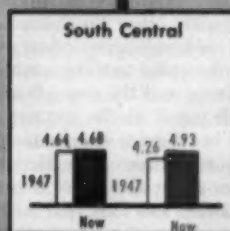
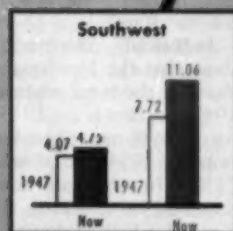
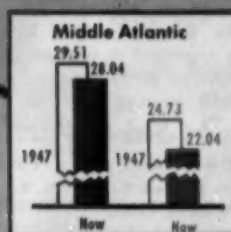
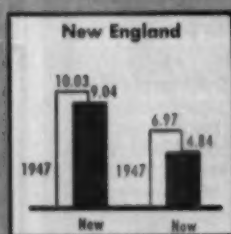
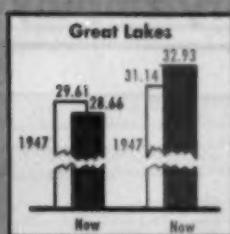
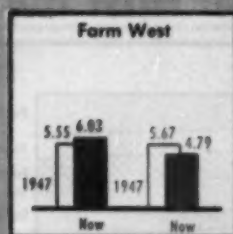
In 1948, when the McGraw-Hill Dept. of Economics took its first post-

war look at the changing habitat of U.S. industry (BW—Aug. 8 '48, p65), its findings confirmed what a great many people had surmised: U.S. production was turning its back on the grimy areas where it was born and was heading toward the greener fields of the South and West. The change was slow, as all migration is. But the trend was there, and many people had themselves seen enough of its effects to become convinced of its proportions.

- **On the Move**—Now the Dept. of Economics has taken a second look at migration—to see what has happened

in the seven years from 1947 through 1954. Since its first study, the U.S. has gone through a consumer durable goods boom, has weathered an inventory recession, has had a wartime prosperity, then a letdown, and finally has come back to boom again. Manufacturing capacity is now half again as big as it was in 1947. Of the \$80-billion spent by manufacturers on new plant and equipment since then, half has gone for new capacity. Where—geographically—has this money gone?

A quick answer would be that it has gone where it has been going—out of



Pacific Grows Fastest

New England, out of the Middle Atlantic and into the rest of the country, notably the Southwest and the Pacific Coast. But this leaves out what is really the most surprising fact about the migration of the last seven years—namely that the shift has been just as fast as it was in the unsettled days of World War II. And the movement is no longer concentrated in a few industries, such as textiles and leather. By and large, it is across-the-board now.

• **Chicken-Egg**—It would be easy to say that American industry has simply been following the over-all population

shift in what it has been doing. But the fact is there is no way of telling how much industry has moved because of people, and how much people have moved because of industry. All that can be said is that the population and income shifts of the last 15 years have created new markets, and that industry—whether through cause or effect—is now permanently attached to those markets.

• **Why Move**—In some cases, the reasons for the attachment are obvious. In others, they boil down to no more than the whim of company executives.

Why, for instance, have companies moved away from New England?

Relatively high transportation costs have been definitely a factor in the outmigration from the Northeast. The lack of raw materials has been a factor, too, and on top of this has been the cost element. New England can offset its relatively high costs only by getting better-than-average productivity in its industrial operations. In the years since the war, the area doesn't seem to have been getting it.

Add all this to the fact that New England's population growth—and its market—are lagging behind the rest of the country, and you have some of the reasons why manufacturers have been severing age-old ties in the Northeast

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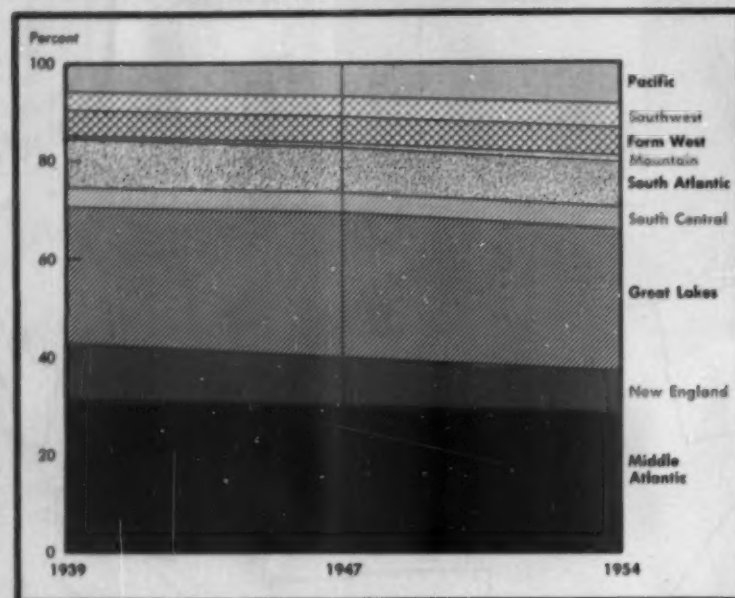
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Factory Employment: How the different



Big loser has been Northeast—giving up 3% since 1947.

and making new ones in the South.

The South's appeal, of course, is that it is a market with a growing demand for consumer goods—and has plenty of labor, at a price that industry likes, to make them. With this, there is an abundance of natural resources, fuels, and above all, relatively cheap power. Combined with other considerations—local taxes and subsidies, plant write-offs for construction outside established industrial areas, and the over-all aims of industrial dispersal in the atomic age—these have been more than enough to make many companies turn their backs on the states where they were born.

• **Three Yardsticks**—This year, in tracking down industry's movements since 1947, McGraw-Hill used three yardsticks: (1) Manufacturing employment, as gathered from figures of the U.S. Bureau of Labor Statistics and the various state agencies; (2) capital spending by manufacturers for new plant and equipment as reported by the annual surveys of the Bureau of Census and the last complete manufacturing census, which was in 1947; (3) industrial construction contract figures compiled by Engineering News Record, a McGraw-Hill publication.

Here, briefly, is what each of these shows:

Manufacturing employment figures for 1947 and 1954 indicate that the Northeast—New England and the Middle Atlantic states—has lost 3% of its share of total factory jobs in the nation. This loss has been the gain of the West and of the South. The North Central states—the Great Lakes region and

the Farm West—show no change.

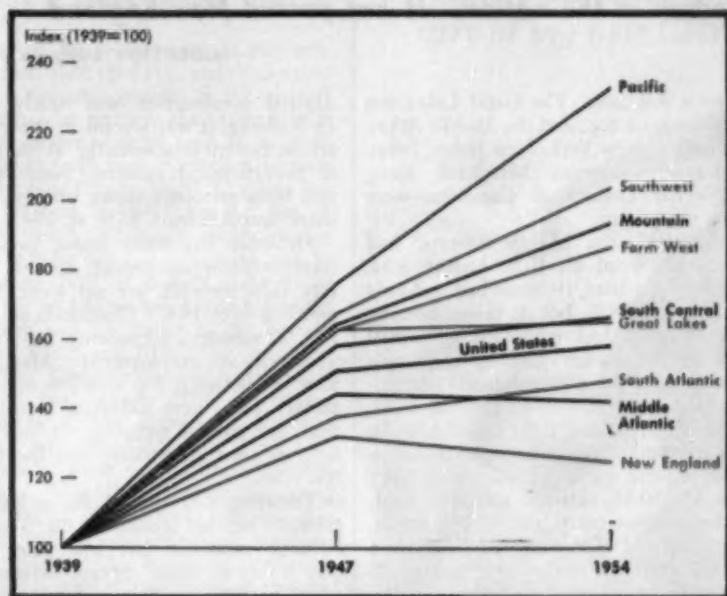
Capital spending figures for new plant and equipment confirm this shift. Data for 1953—the latest year available—show the Northeast with a 5% smaller share of the U.S. total than it had in 1947. The South is up 4%, the North Central 1%, and the West has no change.

Industrial construction contracts show that the Northeast lost 5% of its share of the total when compared with 1947. Whereas in 1939, it accounted for 40% of new plant building, its portion in 1954 was down to less than 25%. In the last seven years, the South added 2% to its share, the North Central which dropped 13% between 1939 and 1947 recovered some of its earlier loss, and the West, for the first time, had a 5% dip. (Most of the loss was centered in the Mountain states.)

• **By Region**—The sections that follow give a more detailed look at what has happened within each region, within the states, and within the major industries. At this point, however, one thing is clear: Industrial migration is going to continue relentlessly to change the industrial map of the U.S. The trend to decentralization because of the hydrogen bomb is only now beginning. The St. Lawrence Seaway has several years to go before its effects are even felt, let alone assessed. These, and other factors, are bound to leave an indelible imprint. By 1960 the picture that is now in view may be considerably redrawn again.

This, however, is how it looks at the moment:

regions have gained or lost in 15 years



Fastest growing regions are Pacific, Southwest.

I. New England

In terms of its share of total U.S. factory jobs, New England has been slipping since the early 1930s. By 1954, it had slid again—from No. 3 spot it held in the regional standings of 1947 down to No. 4.

Once a predominantly softgoods region, New England is now split 50-50 between soft and hard. Since 1947, its employment in durable goods manufacturing has picked up slightly—but not enough to balance out a 15% drop in softgoods jobs. Over-all, manufacturing employment in 1954 was down 8% from 1947.

So far as its share of U.S. factory jobs goes, New England has gained ground since 1947 in five industries—furniture, shipbuilding, railroad equipment, apparel, and leather—has held its own in six, and lost standing in nine others. In two of these nine, textiles and aircraft, the loss in its share has been substantial—5% or more.

• **Pattern**—Among the six New England states there is none that is running counter to the over-all regional trend. But there are some that are showing more resistance to it than others. Although Connecticut has now lost its rank as one of the dozen states with the highest industrial activity in the U.S., its share of the nation's total factory jobs dropped only slightly between 1947 and 1954. Its share of industrial construction was down only a little more than 1%.

Massachusetts, which dropped back from seventh to eighth spot in factory

jobs, nevertheless retook from New York its old standing as No. 1 shoe and leather state. Though textiles have fallen off substantially, the Bay State has been able to take consolation from a rapidly growing communications-equipment industry.

Against this, Maine's industry has been steadily moving away; New Hampshire's volume of new industrial construction and capital spending for plant and equipment has fallen off to practically nothing; and Vermont's factory employment is down 8%, despite an increase in metalworking.

Rhode Island's manufacturing employment in 1954 was just about where it was 15 years ago. But very little new industrial plant is being built in the state.

• **Outlook**—At this point, the outlook is for more of the same for New England, rather than a sharp reversal of its slide. Both its population and per capita income have been increasing at a slower rate than for the nation as a whole. And though it still had 9% of all U.S. factory employment in 1954, New England's share of new plant construction—5%—wasn't keeping pace with jobs.

II. Middle Atlantic

What was long the top-ranking industrial area of the U.S. is top-ranking no more.

In 1947, there was little to choose from in calling either the Middle Atlantic or the Great Lakes the No. 1 industrial region. By 1954, though, the

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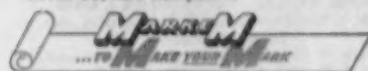
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"... the South Atlantic is now the third-ranking industrial region in the nation. It has passed New England ..."

MIGRATION starts on p. 78

choice was clear. The Great Lakes was definitely on top, and the Middle Atlantic states—New York, New Jersey, Pennsylvania, Delaware, Maryland, along with the District of Columbia—were the runners-up.

In 1947, the Middle Atlantic had about 30% of all U.S. factory jobs. Seven years later, its share had not only dropped to 28%, but its manufacturing employment had registered an actual decline. Although jobs in hardgoods plants were up 3%, softgoods employment dropped 7% from 1947 to 1954. Like New England, the Middle Atlantic has been shifting to hardgoods manufacture, and by 1954 jobs were split roughly 50-50 between soft and hard.

• **Increase**—Actually, the Middle Atlantic's share of U.S. factory employment has increased in only three hardgoods industries—fabricated metal products, autos, and railroad equipment. In aircraft and shipbuilding, its chunk of the U.S. total shrank considerably, as it did in apparel in the softgoods class. Although the region held its own in two industries, there were moderate declines in 12 others. High wage rates have worked as a drag on much new plant building and, in the case of apparel, have been a major factor in the exodus to the South.

On a state basis, Pennsylvania is first in the country in capital spending, second in factory employment, and fifth in new industrial construction. It tops all others in railroad equipment and in primary metals, although the new Fairless Works wasn't enough to keep its metals share from dropping from 24% in 1947 to 21% in 1954. It picked up in apparel, but not enough to climb from the No. 2 spot into the top U.S. ranking. Meanwhile, it lost to Ohio its title as biggest in stone, clay, and glass.

• **Most Jobs**—New York, with 12% of all factory employment in the country, still leads the pack in jobs. But its piece of the U.S. total has been shrinking. In jobs, its share has dropped off 1% in the last 15 years, in new industrial construction nearly 2%, and in capital spending 3%.

The gap between the state's industrial construction in 1954—3% of the nation's total—and its 12% of all factory employment suggests one thing: New York may be hard put to hold onto its dominant position in the years ahead.

In New Jersey, the situation is just the opposite. In 1954, the state had less than 5% of U.S. factory jobs. But its proportion of the nation's new in-

dustrial construction was nearly 8%. In building, it was second in the country, in factory jobs seventh. With 11% of the chemical industry, New Jersey still leads all other states, although its share dropped from 13% in 1947.

Delaware has made strong gains in transportation equipment, and its factory jobs, over-all, are up more than one-fifth over 1947. Chemicals are the No. 1 industry, accounting for about 37% of all employment. Maryland now has between 1% and 2% of U.S. factory jobs, new industrial construction, and capital spending. It looks to hold its own industrially over the next few years.

• **Teetering**—On the whole, industrial capacity has not gained in the Middle Atlantic over the last few years the way it has in other regions. Manufacturers have tended to concentrate more on new equipment than they have on new plant. The region's 28% share of the nation's factory jobs has not been matched by its share of new construction (19%) or by its slice of plant and equipment expenditures (22%). Thus it appears that the Middle Atlantic will continue to trend down, gradually losing more of its industrial standing.

III. South Atlantic

The last seven years have reversed the downtrend that was apparent in 1947. In terms of factory jobs, the South Atlantic—Florida, Georgia, South Carolina, North Carolina, Virginia, and West Virginia—is now the third-ranking industrial region in the nation. It has passed New England, but still trails the Great Lakes and Middle Atlantic by a sizable margin.

Between 1947 and 1954, manufacturing employment in the South Atlantic picked up 7%. The region is heavy with softgoods, and most of the gain was there, with apparel leading the way. More than two-thirds of its total factory employment is now in non-durables.

• **Big Gains**—In all, 15 industries in the South Atlantic increased their shares of the U.S. total, none lost ground, and five held their own. Big gains showed up in textiles, shipbuilding, and apparel.

In Florida, new industries have sprung up all over the state. Food and lumber, which had nearly 50% of the factory jobs in 1947, now have only about one-third. Over-all, factory employment is up 39%, but the state's share of the national total is only about half as big as its share of new industrial

construction and capital spending. More industry is bound to head south to Florida.

• **Aircraft Soars**—Georgia's factory employment shot up 13%, mainly because of the fantastic growth of the aircraft industry. In textiles, the state is now fourth in the country, and if its push continues, will pass Pennsylvania soon for the No. 3 spot. North Carolina has strengthened its hold on the No. 1 textile perch and has a strong chance to pass New York and become tops in furniture. Still, it doesn't seem to be growing so fast as was predicted when industry was bee-lining to its borders in the 1930s and 1940s.

South Carolina, where textiles and apparel have nearly 70% of factory employment, has pushed its manufacturing jobs up 8% since 1947. In chemicals, there was nearly a fivefold increase. Virginia's share of the country's factory jobs is only half the size of its share of new industrial construction. Already the leader in shipbuilding, it has good chance for more growth. So has West Virginia—despite the fact that its loss of factory jobs between 1947 and 1954 was the second biggest in the nation.

• **More**—In all, the South Atlantic should continue to add to its industrial share with moderate gains over the next few years. The region's share of new plant construction is still a shade out in front of its share of factory jobs. The area has a tremendous pool of labor and cheap power.

IV. Great Lakes

Now the top industrial area of the U.S., the Great Lakes climbed onto the highest rung not because its gain was big, but because its loss was small. In terms of its chunk of the nation's factory jobs, the Great Lakes dropped back 1%. But the Middle Atlantic skidded 2%, and that made the difference.

The Great Lakes today is about 70% durable goods, 30% nondurable. In 11 industries, its share of U.S. employment dropped between 1947 and 1954. In eight others, there was a pickup, and one had no change. On the loss side, the important skids were in railroad equipment, fabricated metals, leather, rubber, furniture, and autos. The most significant gain was in aircraft. Taken as a whole, factory employment inched up just a shade more than 1%, which was the smallest hike recorded by any region.

• **Ahead**—Indiana appears to be doing relatively better than the other states of the Great Lakes. Unlike Illinois, Michigan, Ohio, and Wisconsin, its share of U.S. factory jobs did not decline between 1947 and 1954. Its percent of nationwide construction and

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capital spending is ahead of its slice of total factory jobs, which would seem to point to more growth.

Illinois is still the fourth most important state in factory employment and capital spending. But it has slipped from fourth to seventh in new industrial construction. It continues to top all other states in food, though it has lost its spot as No. 1 in electrical machinery.

• **Gains**—Because of the recession in auto output in 1954, Michigan's factory employment was only 1% higher last year than it was in 1947. From 5th ranking in jobs, it fell to sixth. Against this, though, there were gains in capital spending and in new industrial construction. The state, which was not even in the top 12 in construction contracts in 1947, nailed down the No. 6 spot last year.

Despite decentralization of the auto industry, Michigan still has 55% of its employment, compared with 57% in 1947. In machinery, it has made strong gains to become third-ranking in the country.

Ohio, the leading machinery state, added to its lead. It gained, too, in stone, clay, and glass. But it lost 4% of its share of rubber and had to yield the top spot in fabricated metals to New York. It ranks today as second biggest in capital spending, third in factory jobs and industrial construction.

Wisconsin is showing strong growth in electrical machinery and in 1954 was 12th in the nation in new industrial construction. Prospects are good that it will improve its position.

• **Prospects**—For years, the share of new construction going into the Great Lakes has trailed behind its percent of factory jobs. However, enough new equipment capacity has been added to suggest that the region won't suffer much loss in its industrial standing over the next few years. In fact, depending on how much difference the St. Lawrence Seaway makes, it may face an even fatter future.

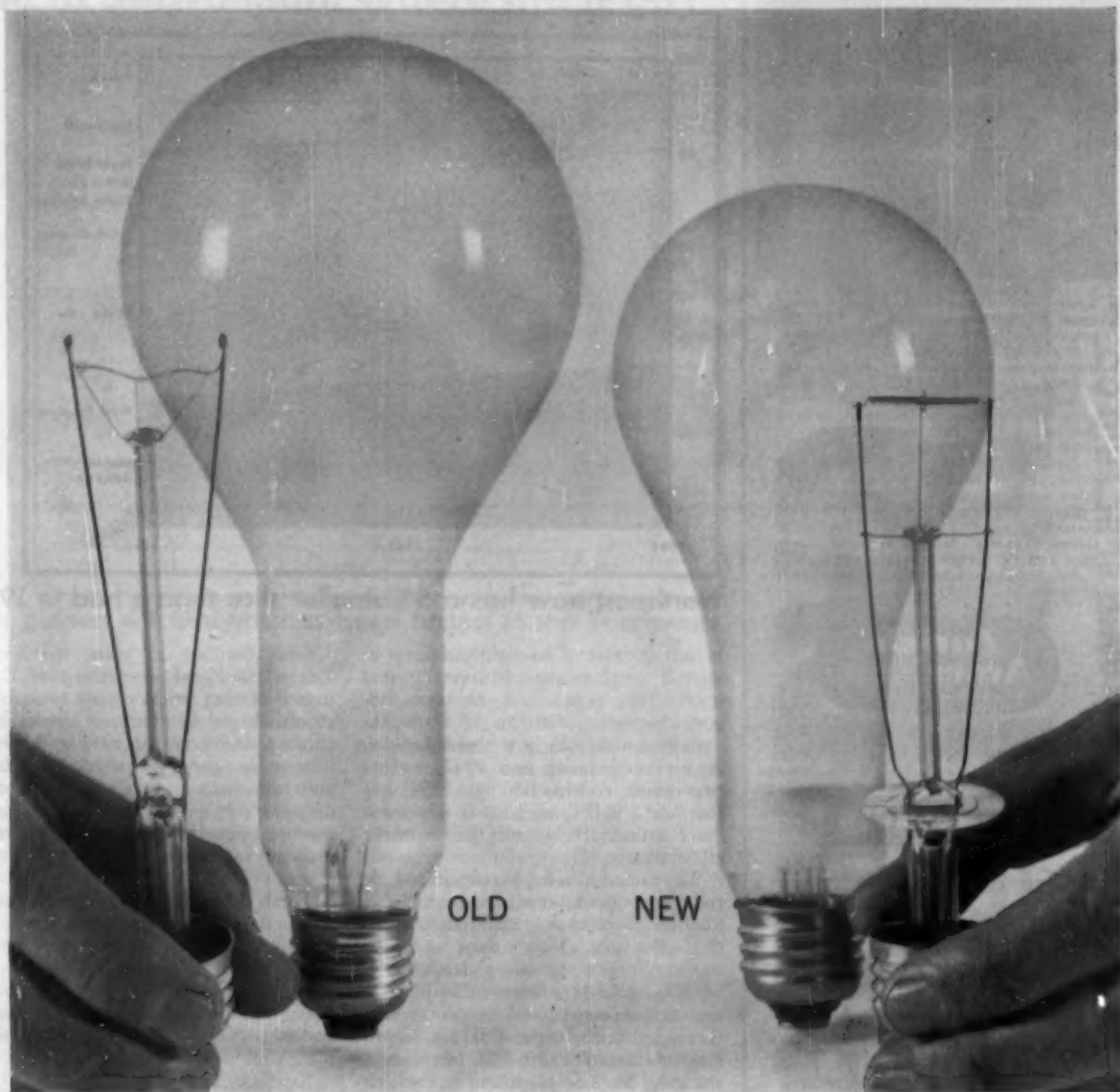
V. Farm West

Moderate industrial growth has been the lot of the Farm West for a good many years now. Since 1939, it has increased its share of total U.S. employment in manufacturing by 1%. Actual factory jobs climbed 13% between 1947 and 1954.

• **Score**—In the last seven years or so, the Farm West's seven states—Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota—added to their share of jobs in six industries, had no change in seven, and lost in six. With the help of industrial dispersion, their chunk of aircraft increased substantially.

In Kansas, factory jobs shot up 63%,

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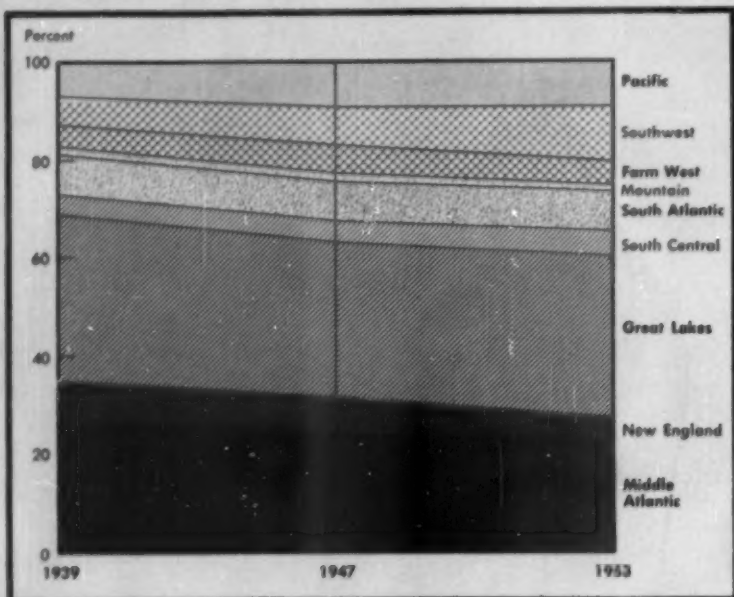
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In seven years, capital spending came



Northeast now has a 5% smaller slice than it had in 1947.

mainly because of an eightfold jump in aircraft employment. Missouri posted a 10% hike, primarily for the same reason. Nebraska, with an 18% rise in manufacturing jobs, just about doubled its capital spending over 1947, and its new plant construction in 1954 was four and a half times what it was seven years earlier. It has all the earmarks of future growth.

The same holds for Minnesota, where the percent of new construction is roughly three times the state's share of factory jobs. Iowa's share of building and capital spending, however, is running behind its share of manufacturing employment, and rapid growth seems unlikely. In the Dakotas, North Dakota posted a five-fold increase in spending for new plant and equipment and an 8% climb in employment. But its factory jobs are next to lowest in the nation, and South Dakota is only two ranks higher.

• **Moderate**—Throughout the Farm West, the share of new plants being built is somewhat higher than the region's slice of manufacturing employment. Thus the prospect is for continued moderate growth.

VI. South Central

As a region, Alabama, Kentucky, Mississippi, and Tennessee are now saved from having the smallest share of factory jobs in the country only by the Mountain states. In 1947, the South Central also managed to top the Southwest. But that was before the Southwest's spurt.

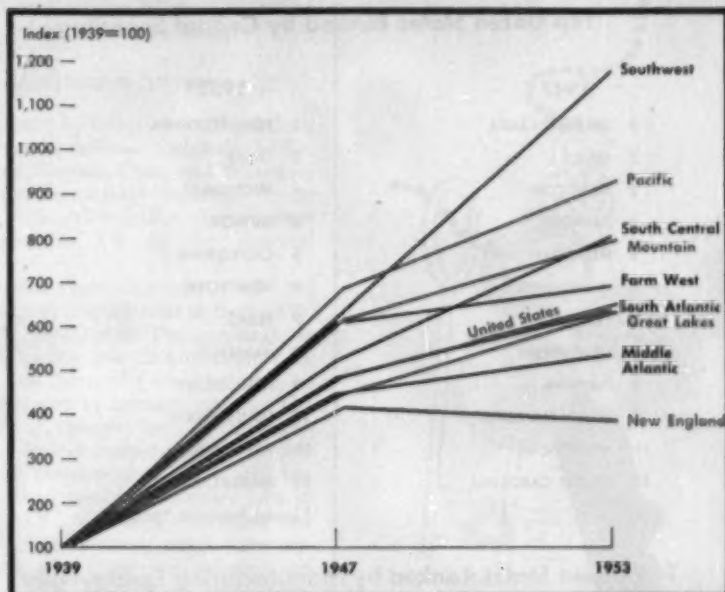
Over the last 15 years, the South Central has kept its percent of U.S. manufacturing employment practically steady. In actual numbers, factory jobs climbed 5% between 1947 and 1954. The gains were in softgoods—apparel and chemicals. Jobs in hardgoods dropped off, so nondurables are now a more important part of the region's economy than they were seven years ago.

• **Totals Up**—All told, the South Central bettered its standing in 10 industries, lost in five, and had no change in another five. There were no drops in nondurables, which make up about 58% of all factory jobs in the area. In the shoe and leather industries, there were sizable gains.

Kentucky, for one, appears to be headed for more growth. Its share of new plant construction is nearly 2%, while its portion of nationwide manufacturing employment is less than 1%. The biggest gains in the state have been in chemicals and metals and metal products.

Mississippi, which had the lowest average hourly wage in the country in 1954, has a fast-growing apparel industry that nearly doubled its employment in 1947-1954. Lumber is still top, however. Tennessee had a jump of 8% in factory jobs, but its share of new industrial construction has been dropping off. The state ranks fifth in chemicals and it has had a fivefold jump in electrical machinery. Alabama's apparel industry produced more growth in jobs than any other. The state has more than 1% of all factory jobs in the

close to \$80-billion. Where did it go?



South gained 4%. Growth has been fastest in the Southwest.

U.S., but its proportion of new industrial plant is only about half of that.

• **Slow**—At the moment, the future industrial growth of the South Central looks to be slow. The region's present share of employment is somewhat higher than its proportion of new plant. However, capital spending is a shade higher than the employment percentage, which could make for moderate growth, if not fast.

VII. Southwest

Arkansas, Louisiana, New Mexico, Oklahoma, and Texas make up what is now the second fastest growing region in the U.S. From all signs, it may soon be the fastest.

Though its share of the U.S. total is still small, the Southwest can no longer be called the "infant wonder." Between 1947 and 1954, its share of the factory jobs in the country rose 1%—enough for it to climb past the South Central into seventh place in the national standings. In all industries, except autos, the Southwest now accounts for more than 1% of national employment totals. Over the last seven years, its share of U.S. jobs climbed in 16 industries, dropped in only one, and showed no change in three others.

In actual numbers, factory employment in the Southwest was up 22% in 1954 over 1947. The gains were strongest in durable goods, which now make up about 46% of manufacturing employment in the area. This is up from 44% in 1947 and reflects the added emphasis that hardgoods have been get-

ting lately throughout the region.

• **Texas First**—As it did in 1947, Texas still leads the nation in new industrial construction. It ranks 12th in manufacturing jobs, seventh in capital spending. Although the state is already the leader in petroleum refining—and has made strong gains in chemicals—it still has a tremendous growth potential. Its share of new industrial construction is nearly 15% of the national total. But its portion of factory jobs is less than 3%.

Oklahoma's factory employment jumped 34% between 1947 and 1954—mainly because of expansion in metal products. Its new industrial construction is running more than four times its share of factory jobs. New Mexico's gain of 79% in factory employment over the last seven years is the biggest in any state. Most of it centers in durable goods. In Louisiana, chemicals and paper are expanding rapidly, and the state now ranks ninth in capital spending. Arkansas has balanced fewer jobs in lumber with new jobs in apparel, chemicals, and leather. But the state's share of new industrial plant dropped well below 1% in 1954.

• **Potential**—The Southwest will grow tremendously in the future. Its share of new construction has been running at about one-fifth of the nation's total, and it has had more than one-tenth of capital spending. Against this, its slice of factory employment is less than 5%. A consistently bigger share of new plant over the last few years can mean only one thing: A big increase in industrial employment is certain to

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Top Dozen States Ranked by Capital Spending

| 1947 | 1953* |
|-------------------|------------------|
| 1 PENNSYLVANIA | 1 PENNSYLVANIA |
| 2 OHIO | 2 OHIO |
| 3 NEW YORK | 3 MICHIGAN |
| 4 ILLINOIS | 4 ILLINOIS |
| 5 MICHIGAN | 5 CALIFORNIA |
| 6 CALIFORNIA | 6 NEW YORK |
| 7 TEXAS | 7 TEXAS |
| 8 NEW JERSEY | 8 INDIANA |
| 9 INDIANA | 9 NEW JERSEY |
| 10 MASSACHUSETTS | 10 LOUISIANA |
| 11 WISCONSIN | 11 WISCONSIN |
| 12 NORTH CAROLINA | 12 MASSACHUSETTS |

* Latest Available Year.

Top Dozen States Ranked by Manufacturing Employment

| 1947 | 1954 |
|-------------------|-------------------|
| 1 NEW YORK | 1 NEW YORK |
| 2 PENNSYLVANIA | 2 PENNSYLVANIA |
| 3 OHIO | 3 OHIO |
| 4 ILLINOIS | 4 ILLINOIS |
| 5 MICHIGAN | 5 CALIFORNIA |
| 6 NEW JERSEY | 6 MICHIGAN |
| 7 MASSACHUSETTS | 7 NEW JERSEY |
| 8 CALIFORNIA | 8 MASSACHUSETTS |
| 9 INDIANA | 9 INDIANA |
| 10 WISCONSIN | 10 NORTH CAROLINA |
| 11 CONNECTICUT | 11 WISCONSIN |
| 12 NORTH CAROLINA | 12 TEXAS |

Top Dozen States Ranked by New Industrial Construction

| 1947 | 1954 |
|----------------|----------------|
| 1 TEXAS | 1 TEXAS |
| 2 PENNSYLVANIA | 2 NEW JERSEY |
| 3 CALIFORNIA | 3 OHIO |
| 4 ILLINOIS | 4 CALIFORNIA |
| 5 NEW JERSEY | 5 PENNSYLVANIA |
| 6 LOUISIANA | 6 MICHIGAN |
| 7 WISCONSIN | 7 ILLINOIS |
| 8 NEW YORK | 8 INDIANA |
| 9 CONNECTICUT | 9 VIRGINIA |
| 10 OHIO | 10 MINNESOTA |
| 11 MISSOURI | 11 NEW YORK |
| 12 INDIANA | 12 WISCONSIN |

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follow. This forecast seems even more likely in view of the fact that the Southwest's pay scale, which has been below the national average in most manufacturing industries, is now rising.

VIII. Mountain States

Measured by factory jobs, the Mountain states of Arizona, Colorado, Idaho, Montana, Nevada, Utah, and Wyoming make up the smallest industrial region in the U.S. All together, they account for just over 1% of the national total.

• **Durables Gain**—Between 1947 and 1954, factory employment shot up 18%. Durable goods, with the emphasis on aircraft, led the way. In Colorado, food, which has been the top industry, is losing ground to primary metals. The best gains, though, are in chemicals. Nevada had a fantastic gain in new industrial construction, but it still has the smallest number of factory jobs in the country. Wyoming ranks just one notch higher. Primary metals have supplanted food as Utah's top industry, and factory employment is up 18%. Arizona, with a substantial jump in its share of new plant construction, had a 77% climb in factory jobs. In Montana, metal-mining accounts for more employees than any manufacturing industry. In Idaho, 55% of manufacturing employment is in lumber.

• **Going Strong**—More growth seems to be in the cards for the Mountain states over the next few years. The proportion of new plants is a good bit bigger than the region's share of factory jobs. And new federal power projects are making cheap power available for new industry.

IX. Pacific States

Gauged by manufacturing jobs, the Pacific Coast is still the fastest growing industrial area in the nation. Between 1947 and 1954, it added 2% of all U.S. jobs to its share of the total. Now ranked fifth industrially, it should pass both New England and the South Atlantic by 1960, if it continues to expand the way it has.

In the seven years up through 1954, factory jobs in California, Washington, and Oregon climbed 33%. Hardgoods employment, powered by close to a threefold increase in aircraft, posted nearly a 50% rise.

• **Up and Down**—All told, 12 industries in the region increased their shares of U.S. total jobs, and four—all in durables—lost ground. Despite the tripling of aircraft jobs, the Pacific's slice of the industry dropped significantly. Other regions had even bigger gains.

Where California was eighth in manufacturing employment in 1947, it is now fifth, with an increase of 44%



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in factory jobs, its share of the nation's total rose 2% to bring its portion to just a shade under 7%. It slipped a notch—down to fourth—in new industrial plant, and the same thing happened in capital spending, where it dropped from fifth to sixth. The decline in its share of capital expenditures, however, was very slight.

In Washington, employment in factories went up 9%, with aircraft again supplying the power, as it did in California. Oregon still has lumber as its dominant industry, and wood takes up about 55% of the state's manufacturing jobs.

• **Drooping**—At this stage, the industrial growth potential of the Pacific is beginning to look a little less spectacular. Its share of new plant and of factory jobs are just about in balance—both around 9% of national totals. Thus, there may be a slowdown of growth from now on, although new and expanded federal hydropower in the Northwest will keep up a good amount of momentum and provide a potent lure for new building.

X. City-Industry Changes

By 1954, the effects of industry's decentralization—and its shift from the big metropolitan areas—were beginning to show clearly across the country. The big metropolitan areas are starting to lose out. The smaller cities and towns are the ones registering the healthy gains.

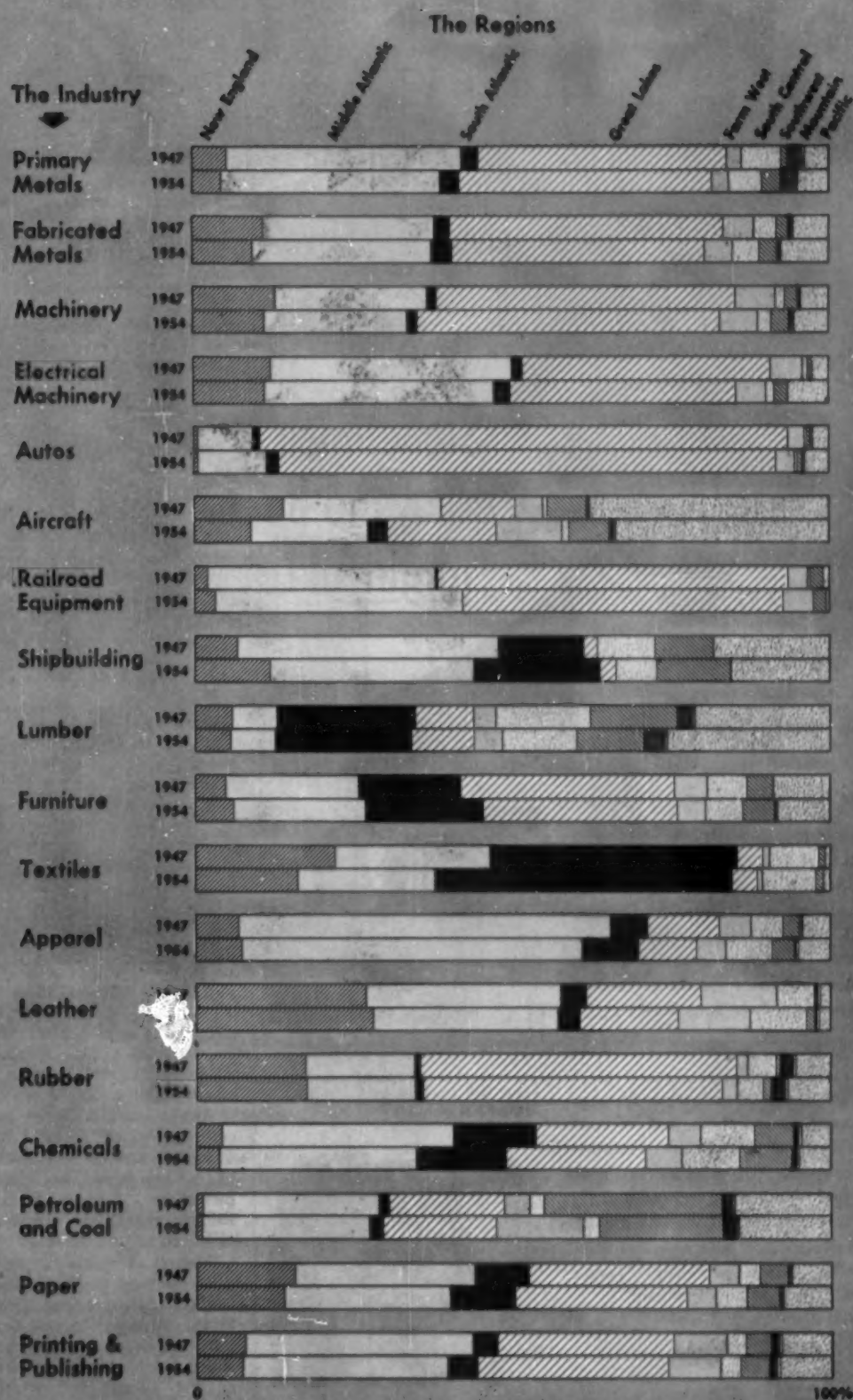
In 21 metropolitan areas, with more than 100,000 factory jobs in 1954, jobs had increased 3.5% since 1947. This compared with a 5% climb throughout the rest of the nation.

Even this record wouldn't stand, however, without Los Angeles, which had a truly striking employment jump. Taken as a group, the other 20 metropolitan areas had no increase at all over the seven years, and some—notably Providence, Pittsburgh, and New York—had substantial losses.

• **Profiteers**—The areas that have profited at the expense of the older centers have been mainly in the South and West.

Miami, Phoenix, Baton Rouge, Albuquerque, Tulsa, Oklahoma City, Port Arthur, Galveston, Greenville, Salt Lake City, Des Moines, and Spokane are all relatively new industrial cores and all are growing rapidly. Against this, the record of the older centers runs all the way from a 64% increase

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"... aircraft has had a dramatic shift since the end of World War II ..."

MIGRATION starts on p. 78

in the Los Angeles area to a drop of 17% in Providence.

• **Industry Changes**—As the table on page 91 shows, the migration trend isn't limited to any particular segment of industry:

Primary metals is following the trail of migration from the Northeast to the South and West. The Middle Atlantic states lost 3% of their postwar job share of the U.S. total; the Southwest gained 1½%, while the Pacific was up 1%. The other regions stayed about as they were in 1947.

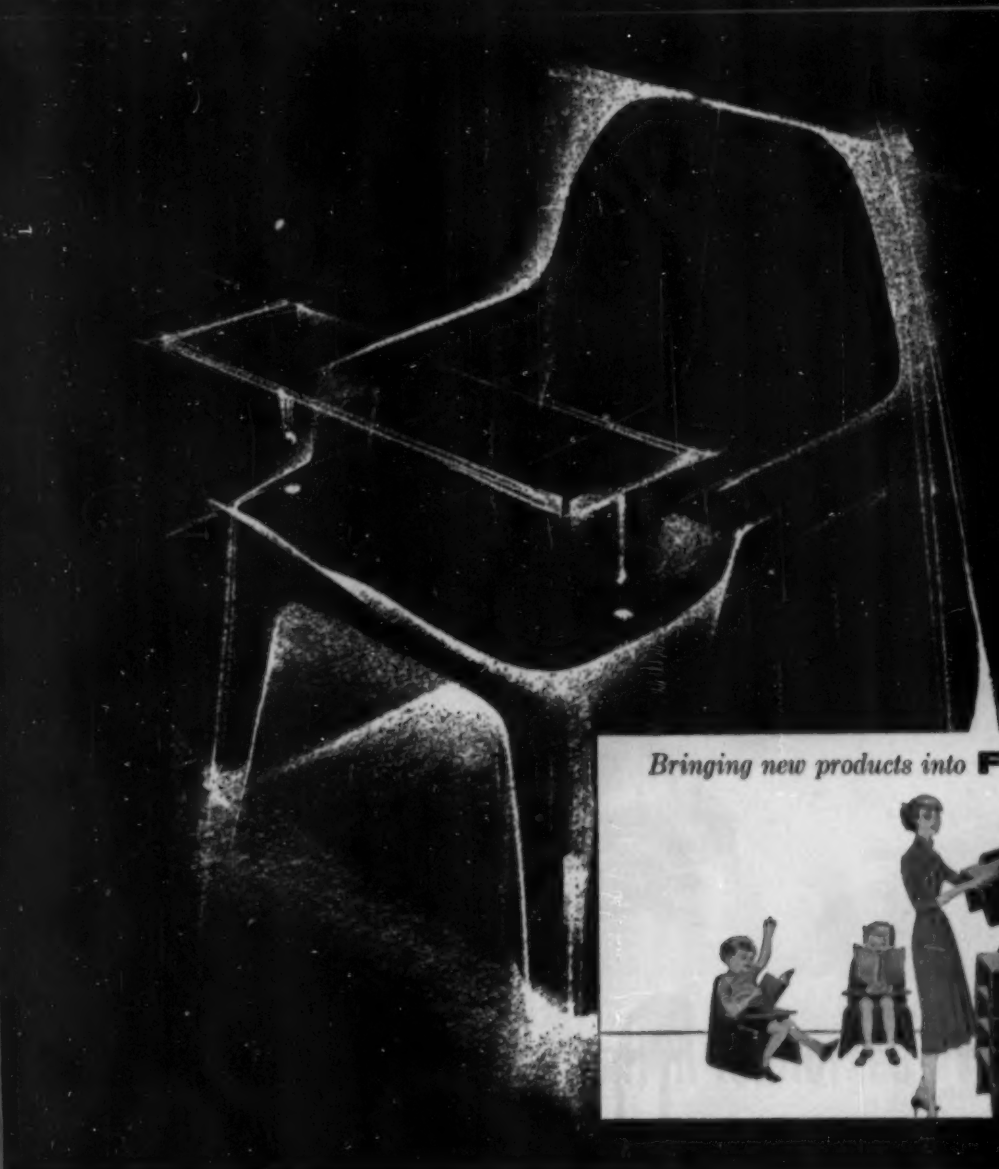
Fabricated metal products, with 43% of its 1947 jobs concentrated in the Great Lakes states, shows a somewhat different pattern from that of over-all migration. The Great Lakes region's share was cut by about 4%; New England's portion fell 1½%. But the Middle Atlantic states increased their percent of the total by 1%, and the three Southern regions each increased their shares by approximately 1%. The biggest gain was in the Pacific—a jump of 1½%.

Machinery has seen less migration than most of manufacturing. The industry is centered in the five Great Lakes states, where nearly half of all its workers are employed. Actually, the Great Lakes region added to its share during the last seven years. What trend there was, though, was away from New England and the Middle Atlantic toward the Southwest and the Pacific.

Electrical machinery has undergone a striking shift. The Pacific Coast upped its postwar share of jobs by about 4%, and the Southwest added to its relatively small share by 1½%. Against this, the Great Lakes' slice dwindled by 3%, while New England and the Middle Atlantic states, together, showed a drop of 2%.

Autos, with 82% of its jobs concentrated in the Great Lakes states in 1947, has shifted slightly into the rest of the country. The Middle Atlantic picked up 2% of the U.S. total. The Pacific region also increased its share of the industry by 1%.

Aircraft has had a dramatic shift since the end of World War II. The Middle Atlantic and New England States combined to lose about 11% of their postwar share of jobs. Meanwhile, the Pacific, with about 38% of all the aircraft industry employment in the country, lost 3½% of its share. Against this the Great Lakes added 6% to its postwar share, the Farm West did about the same, and the South



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If you would like a glimpse of other possible new uses for reinforced plastics, you are invited to request "A Sketchbook of Profitable Products." Write on your letterhead to Monsanto Chemical Company, Plastics Division, Dept. BW-8, Springfield 2, Massachusetts.



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WHenever you want to make a good office
... a little better

**"... food processing has
had less migration than
any other industry ..."**

MIGRATION starts on p. 78

Atlantic, with Georgia leading the way, increased its portion 24%.

Shipbuilding has a completely different pattern. The Middle Atlantic region had a 9% loss in its share of postwar jobs, mostly because of a sharp drop in shipbuilding employment in New York. However, New England increased its share of the industry by 5%, while the Pacific lost 3%. The South Atlantic states show the largest increase—an extra 6% on their postwar portion.

Railroad equipment, with more than 90% of its employment in the Great Lakes and Middle Atlantic states, shifted, for the most part, from one of these regions to the other. The Great Lakes lost 5% of its national total, while the Middle Atlantic area increased its share by 3%. The remaining 2% shift was spread between New England and the Farm West states.

Lumber shows a marked shift to the Pacific. Its share increased 44%, while that of the South Central region shrank by 2%, and that of the Southwest by 3%. A strike in the lumber industry during 1954 may have distorted the employment figures. But since the strike was centered on the Pacific coast, any distortion would mean an understatement of the shift.

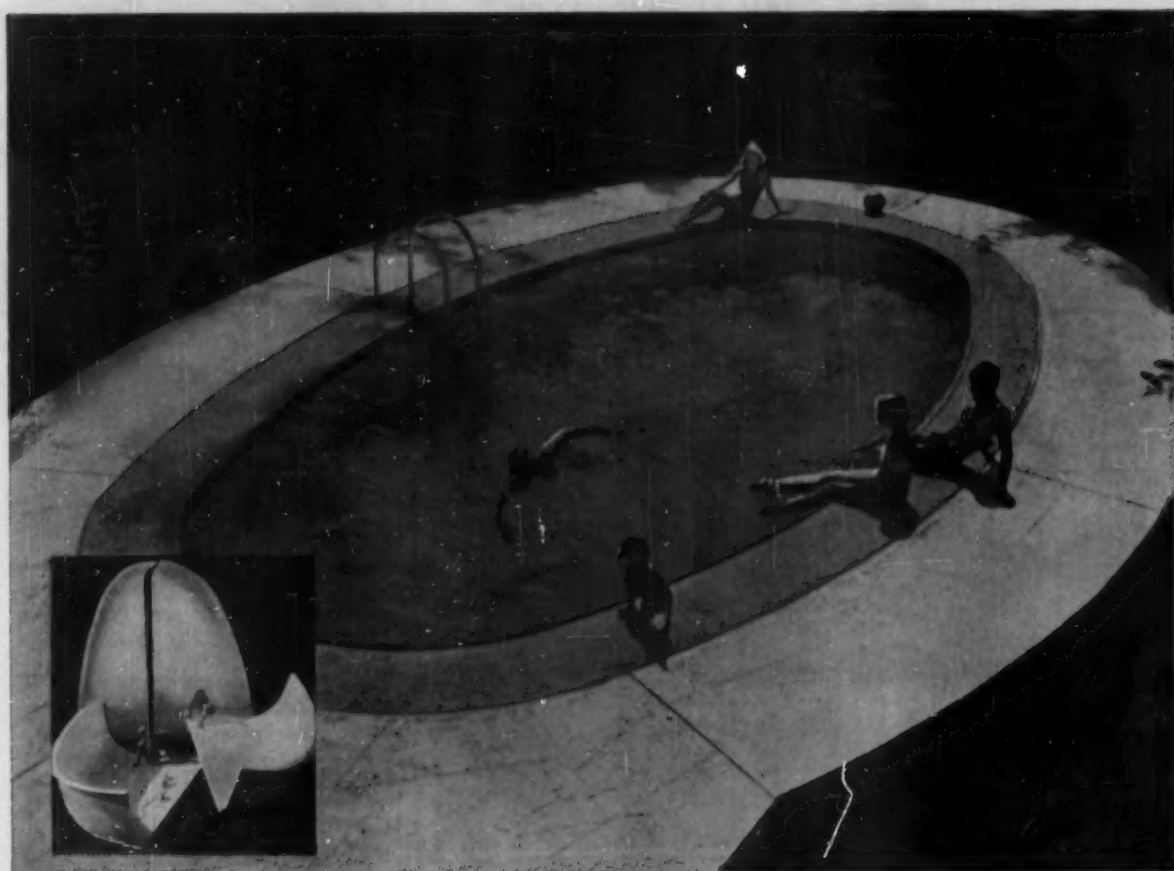
Furniture shows an unusual migratory streak. The Great Lakes states lost 3% of their share, and the Pacific region 1% of its. But the South Atlantic, with North Carolina leading the way, added more than 2% to its 1947 share, while New England and Southwest each increased theirs by more than 1%.

Stone, clay and glass shows one big change: A cut of 3% in the Middle Atlantic's share of 1947 jobs, a gain of 1% in the Great Lakes.

Food processing had less migration than any other industry between 1947 and 1954. Only one region—the South Atlantic, where there was a gain—changed its share in the period by more than 1%.

Textiles are moving to the South Atlantic at a faster rate than ever before. This region, accounting for 39% of 1947 textile jobs, increased its share to 47% in 1954. The gain came at the expense of New England, which lost 6% of its slice, and the Middle Atlantic states, which lost 3%.

Apparel has grown throughout the South. The Middle Atlantic states, with 59% of the industry in 1947, lost 5% of their share. The Great Lakes



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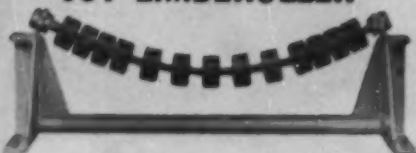


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On abrasive or corrosive jobs, a service life of ten or more times that of conventional idlers is not unusual. Witness the magnesium foundry where Joy Limberollers have operated since February, 1953... and are still going strong! Compare this to the three-month life of the conventional idlers formerly used, *then figure the saving!*

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also lost. But the South Atlantic added 3% to its postwar share, the South Central states increased their share 3%, and the Southwest gained 1% of the total from 1947 through 1954.

Printing and publishing is following the trend from the Northeast to the South and West. The Great Lakes region increased its share 2%, while the Middle Atlantic states now show a 3% cut. Meanwhile, the South added 1% to its share.

Pulp and paper mills have held to the over-all trend closely. The Northeast has lost 4% of its share to the South and West. The Great Lakes states' share has been cut 1%. The three regions of the South increased their shares, and the Pacific scored a gain, too.

Chemicals show one major shift: The Middle Atlantic's share has been cut substantially—nearly 6%, bringing its portion to less than 31%. All other regions of the nation benefited, with the exception of New England. The Southwest region made the biggest gain of all, adding 2% to its share of this growing industry.

Rubber products with 50% of the postwar industry centered in the Great Lakes states (more than one-third in Ohio alone), has shifted relatively little. The Great Lakes region's share fell about 3% between 1947 and 1954. The migration, what there was of it, was mostly to the Pacific and the Farm West.

Petroleum and coal products continues to move South, but slowly. In 1954, the Southwest states accounted for 30% of the total U. S. jobs in the industry. The Middle Atlantic region's share of postwar jobs dropped by 14%, and the South's gained 24%.

Leather shows no definite pattern of migration although shifts are taking place. The major change was a loss of 3% in the Great Lakes' share of the industry. The South Central region (especially Tennessee) gained 3% over its postwar share. Meanwhile, New England recovered 1% of the total. The Middle Atlantic states, which accounted for 31% of the industry in 1947, now have only 29%. **END**

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70

**YEARS OF PIONEERING IN
THE MAKING OF ADHESIVES**

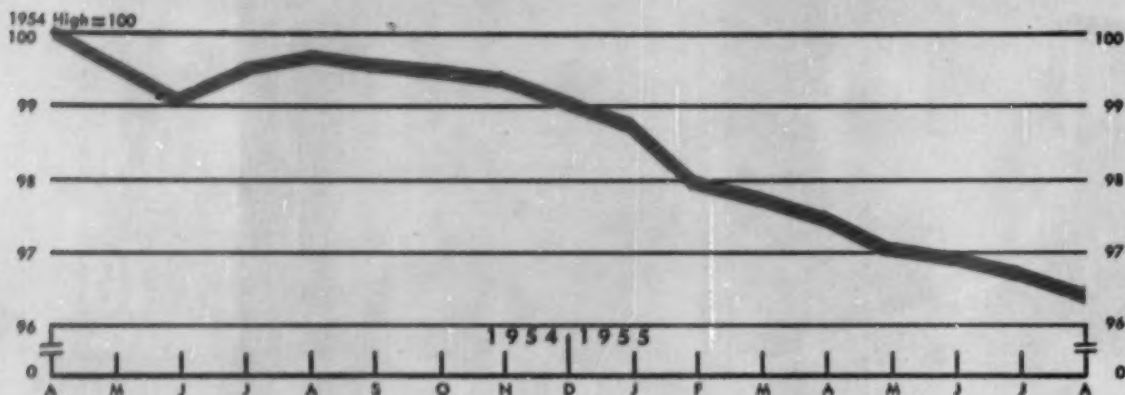


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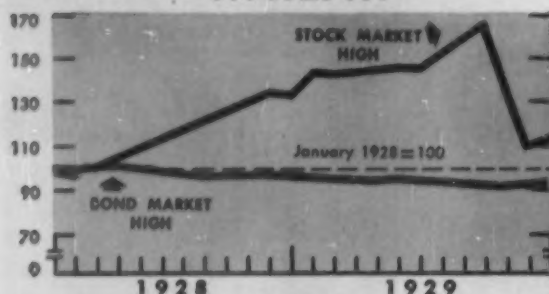
FINANCE

TODAY'S PUZZLER: The Steady Drop in Bond Prices

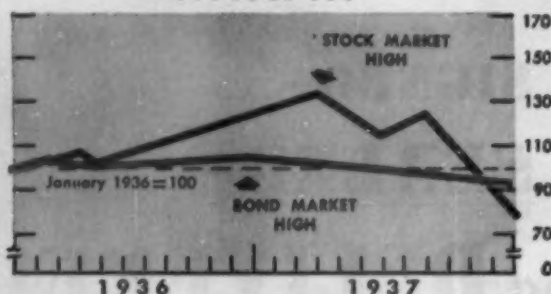


Does it forecast a sharp dip in stock prices as in...

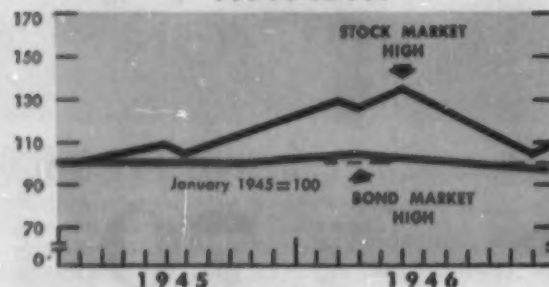
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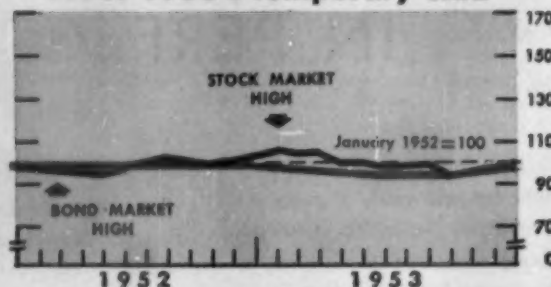
... 1937 ...



... 1946 ...



... or 1953's temporary skid



Data: Standard & Poor's Corp.; Dow-Jones.

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A Warning Sign for Stocks




Wall Street never tires of its favorite old saw, the one about the stock market's only consistency being that it is always inconsistent. But sometimes the teeth of the saw get worn a little dull by over-use. And when the market does decide to follow precedent, it can do it with quite astonishing fidelity.

Right now, with bond prices persist-

ently weak, is a good time to remember these exceptions to the rule of inconsistency. Smart Streeters are becoming worried about this, because of the recent behavior of bonds.

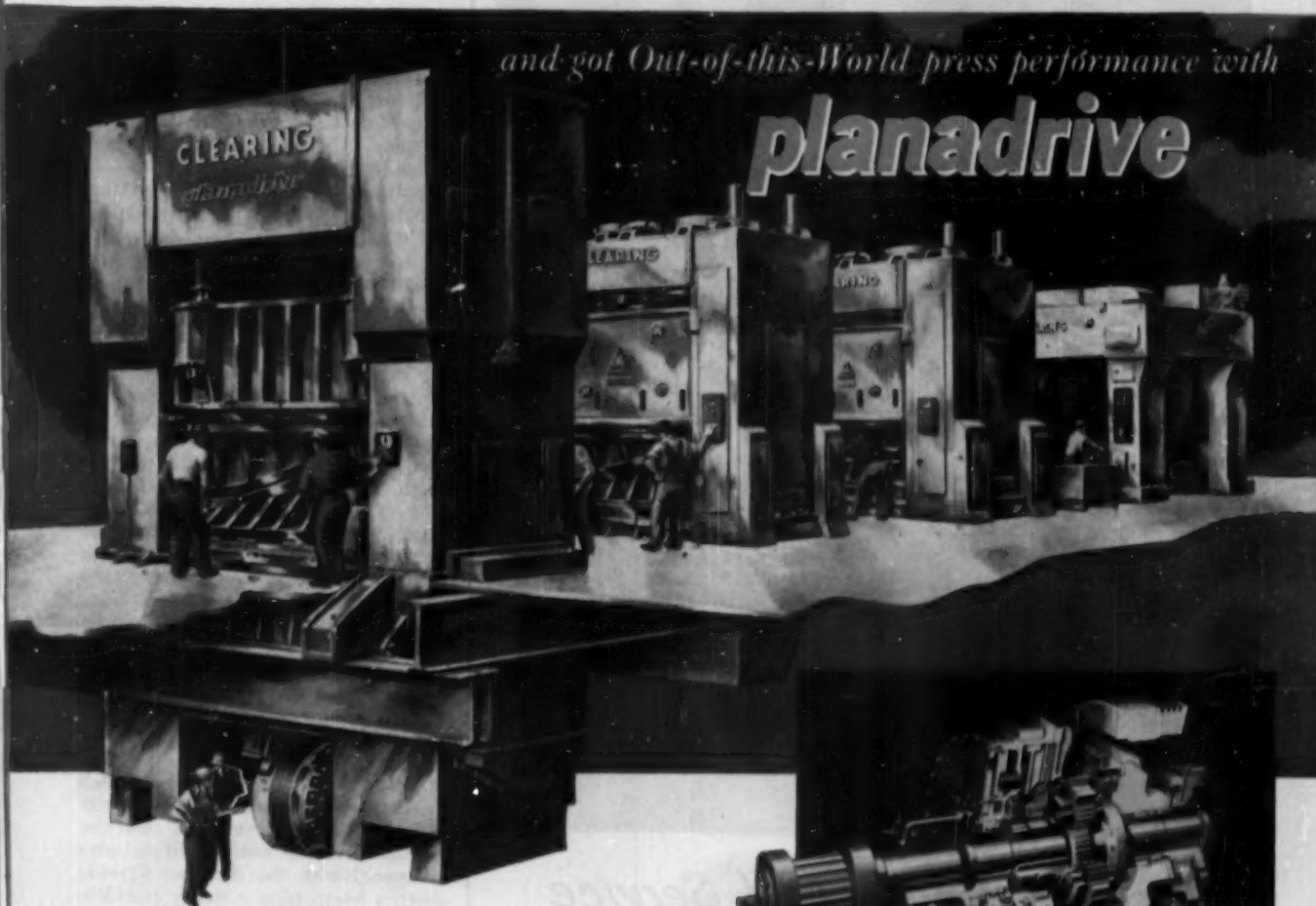
• **True to Form**—The cause of their swivet comes out clearly in the charts above. They show that, in the past quarter century, the softening of bond

prices has repeatedly heralded the death of bull markets in stocks. This was notably the case in 1929, 1937, and 1946. Only once—in 1953—did bond weakness fail in its dire message. Even then the storm signal was not wholly false. There was no hurricane of selling in the market, but lesser price storms over an eight-month

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with little gears like this 

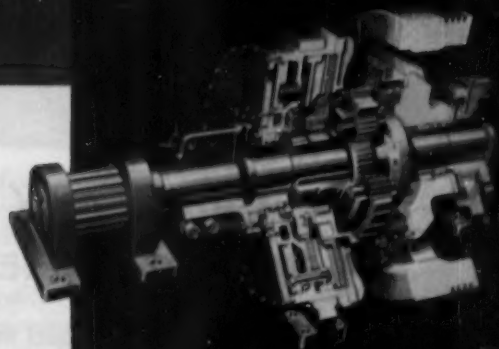
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The Clearing Planadrive is a completely new type of underdrive press in which driveshaft speed is reduced so that it rotates at about one-third the R.P.M. of the flywheel. This new clutch is similar in principle to the Clearing Clearomatic clutch which is used to accelerate the cycling rate of mechanical presses. In the new Planadrive, *Clearing Productivity Consultants replaced the huge intermediate gearing ordinarily required in the press gear train with a set of planetary gears in the clutch itself.

As a result, the Planadrive clutch engages and disengages the drive-shaft at a relatively slow speed so that the kinetic energy of the members to be started and stopped is comparatively low. This results in a low-inertia, cool running clutch and brake. Actually, the kinetic energy in the Planadrive clutch is only 25% in starting (and 12% in stopping) by comparison to a conventional drive. For this reason, the press can be operated at a far higher number of strokes per minute than can be obtained from a conventional press of comparable capacity.



The key to the out-of-this-world performance of the Planadrive press is the clutch shown in cutaway above. Planetary gearing in the clutch reduces driveshaft R.P.M. to approximately 1/3 of flywheel R.P.M.

Planadrive is another example of the kind of thinking Clearing engineers apply to a manufacturer's problem of producing more efficiently. If you're interested in Planadrive, or if you want the kind of thinking that developed Planadrive working for you, call on Clearing Machine Corporation.

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"... any sharp slamming on of the brakes could shake up the all-important electorate ..."

STOCK WARNING starts on p. 98

stretch were strong enough to cause a 16% drop in Standard & Poor's daily industrial stock average.

Currently, the Street is in its normal state of divided opinion over the trends to come. The great majority, scattered about in the center, expect neither cataclysm nor paradise. They feel that the fate of stock prices depends on the reaction of business and the public to past and potential official curbs on the credit boom (BW—Aug. 6'55, p25). At the same time, the various shades of moderate opinion take on considerable color from the more violent thinkers at both extremes:

- On the sorrowing side are the extremists who are convinced that the Administration credit curbs will kill the bull market deadlier than a herding.

- On the extreme of optimism are those who say the credit curbs are just a bluff that can't be made to stick with an election coming next year—and that neither the stock market nor business generally is in for any serious bumps for a good while.

- **Moderate Bulls**—More conservative optimists will admit—though only in the strictest privacy—that there may be something in its peaches-and-cream prophecy.

Their view is that while the Administration is perfectly sincere in its concern over credit excesses and the general pace of business it is also concerned with the election. Slowing down a boom takes a steady and delicate touch. Any slamming on of the brakes could shake up the all-important electorate. Both prosperity and the current "boom worries" are directly due to enormous borrowing for autos, homes, capital spending, and the like. The moderates are sure that sensitive officialdom will do nothing to smear this picture.

- **Unworried**—The same moderates expect no change for the worse in the news from the business front. They are impressed by Detroit's comments on auto prospects (page 25) and by the repeated forecasts of steel executives that their trade will be running close to capacity for the rest of the year.

The outlook for dividends and earnings put another pink cloud in the sky. Thus Moody's predicts that the 125 stocks that make up its industrial index will have 1955 earnings of well over \$10 a share, compared with \$8.33 last year and \$7.71 in 1953.

Meanwhile, the moderate bulls expect no marked easing of the tight money situation. Money costs, they believe, are still low enough to make it worth while for industry to borrow in order to buy labor-saving, cost-reducing machinery, and for the public to continue its buying on the cuff.

These same moderate bulls, unlike their extremist wing, believe that the prices of many stocks already have discounted rather fully the pace of this year's boom and the potentialities of earnings and dividends. Some go so far as to suggest that this would be a good time to build up cash reserves for later "trading opportunities." But few of the moderates think that any ceiling has been reached. They say that tax considerations will prevent any wholesale profit-taking. The worst they can foresee is a trading market in which the quality shares will remain on a high plateau.

• **Moderate Bears**—On the side of the pessimists, you again find the conservatives taking a conciliatory stand, and admitting that there is something to be said for the bullish arguments. Few of them will make any precisely dated prophecies of "bust." On the other hand, they have been urging their clients to get into a position where they can batten down the hatches for any sudden storm. And they find several causes for uneasiness in the general scene:

- There are unfavorable potentialities in the excesses that have finally forced the Administration to move to forestall a boom-and-bust pattern.

- Speculation is growing, notably in being motivated by such things as stock-split rumors rather than on investment fundamentals. You see this trend in rising brokers loans and in the wild gyrations of many formerly sedate stocks.

- An increasing number of stocks are coming to yield less than 4%—sometimes much less. In the past this has always preceded serious investment troubles. And now, S&P's industrial stock index offers a yield of about 3.5%; early in 1954 the figure was 5.83%. At the same time, bond yields have been rising, so that the S&P's index yield is only 1.14 times that of high grade bonds. In 1937, the ratio was 1.16, while at the peak of the 1946 market it was 1.3.

- A "new era" psychology is growing. People are discarding statistical and technical considerations that once served as slow-up signs. This in turn is making people forget that bull markets, being less than logical, always end unexpectedly and without apparent logic; and they forget that bull markets always start to fade when business is looking its perkier, rather than after any decisive setback. **END**



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SEC, Big Board Crack Down

Exchange suspends trading in stock of Peabody Coal on charges over Sinclair mine deal. Commission goes to court to halt Libby stockholder committee action.

Last week, two of the country's most influential financial forces made moves that are raising corporate eyebrows from coast to coast.

The New York Stock Exchange suspended from trading the common and preferred stock of Peabody Coal Co., charging that Peabody hadn't acquired shareholder approval to issue 6.5-million shares of additional stock needed in gaining control of the Sinclair group of coal companies, and that the company switched registrars to register and deliver the new stock without getting Exchange approval of the new shares (BW—Aug. 6 '55, p34).

The Securities & Exchange Commission took a step with even broader consequences. SEC asked a U.S. District Court for an injunction to restrain the Independent Stockholders Committee for Libby, McNeil & Libby from "further violation of the Commission's proxy rules."

The Libby move by SEC tangles up an already spirited proxy fight for control of the nationwide food packer, which had \$262-million in sales in fiscal 1955.

The dissident group, led by New Yorkers Mitchell May, Jr.; Alfred Parry, Jr.; and Wilbur E. Dow, Jr., has been trying to unseat Libby's management since last month, with the showdown scheduled for the annual meeting, next Wednesday.

• **The Charges**—SEC charges that the "defendants have represented to stockholders their objective is to provide the company with more competent management to bring about increased earnings and dividends, when in fact their real purpose is to sell off the assets and to liquidate the business of the company in whole or in part."

The next step came early this week, when hearings started at Foley Square Courthouse in New York. The stockholder committee must show cause why the court should not issue an order restraining the committee from further proxy solicitation.

The SEC complaint undoubtedly was born in Congress, where Sen. John Bricker (R-Ohio) asked for an investigation of the proxy fight by the Senate Banking & Currency Committee. Instead of a full-committee hearing, Sens. Herbert Lehman, J. W. Fulbright, and Homer Capehart met in executive session with SEC Chmn. J. Sinclair Armstrong and Commissioner A. Jackson

Goodwin, Jr. about two weeks before SEC filed its charge.

• **Formal Quiz**—SEC gathered all the proxy material from both management and the stockholder group—SEC must approve all proxy material—and then, because of Congressional interest and its own staff's findings, it held a formal investigation under oath. On the basis of information gathered during these investigations, and the proxy material, SEC filed its action, the first since the Eisenhower Administration took office.

Mitchell May, Jr., chairman of the stockholder committee, immediately called the SEC action "entirely unwarranted" and added that, "It seems to me to be without precedent that charges should be brought based on the presumption of some future action particularly when no such action is contemplated."

May and his associates have made charges against Libby's management similar to those leveled against the May group by SEC and May said he was amazed that "a presumably impartial agency of the government would bring such an action against one party in a contest," while not moving against the other.

Another of the committee leaders said bitterly that "Bridges [Libby Pres. Charles S. Bridges] was convinced there was a bogey man somewhere, someone with big dough like Murchison, Robert Young, or Wolfson." Chimed in Albert Parry, Jr., "They can't seem to understand we're just three boys from Brooklyn and that there's no mystery man in this picture."

• **Criticisms**—The stockholder committee has focused its charges on three areas:

• Libby's distribution setup is especially weak in New York, where distribution is left to food brokers whose chief interest is to push their own labels.

• Libby should sell its unproductive or questionable farming areas, says the committee.

• Libby should buy its cans—it is the second largest purchaser of cans in the country—via competitive bidding, instead of by exclusive contract with American Can Co. as it does now.

If the Libby management wins the proxy fight, the committee says it will go to court on the issue of proxy solicitation by Libby employees.

• **Coal Mine Deal**—While the Libby stockholder group battles with SEC, Peabody Coal has found itself facing an equally formidable adversary. The New York Stock Exchange took what some observers believed to be harsh measures over a technicality. But it is said that the Governors and Pres. G. Keith Funston are being especially tough because of the belief that Peabody Pres. Otto Gressens had tried to short-cut the rules when he switched registrars. The Exchange considers this an attempt to get around its rule that a company can only appoint a registrar who has agreed not to register additional shares of an issue unless the Exchange has approved the new shares.

One observer close to the Exchange believes that Gressens could have gotten shareholder approval to issue the new stock and use it to purchase the Sinclair companies, but simply didn't bother because Big Board delisting, which will probably follow the suspension, won't bother him. Gressens has already implied that listing on the Midwest Stock Exchange is good enough for him.

The Exchange's action was no doubt spurred by two stockholder suits against Peabody, protesting the acquisition of the Sinclair group. The most recent suit charges that the proposed purchase of Sinclair assets would "defraud" Peabody stockholders of more than \$10-million.

FINANCE BRIEFS

The discount rate boost was made unanimous this week as the last three of the 12 Federal Reserve Banks hiked their rates on loans to member banks from 1 1/2% to 2% (BW—Aug. 6 '55, p25). Last week, eight of the Regional Federal Reserve Banks moved rates to 2% and the Cleveland Fed to 2 1/2%.

• **First half earnings**: Chrysler Corp. had record sales and earnings in the first half of this year, and net profits were 74% above the first half of 1954. Chrysler's sales in the second quarter slipped 3.3% behind first quarter levels, but the company still managed to boost net by nearly 3%. Eastern Air Lines reported gross revenues in the first six months 18% better than first half of 1954. After-tax profits totaled \$4.2-million, nearly three times higher than the comparable 1954 figure.

• **Variable Annuity Life Insurance Co.**—the first company specifically organized to sell variable annuities—has been licensed by the District of Columbia. It will sell annuities based on market values and yields of common stocks in a special fund (BW—Dec. 11 '54, p101).

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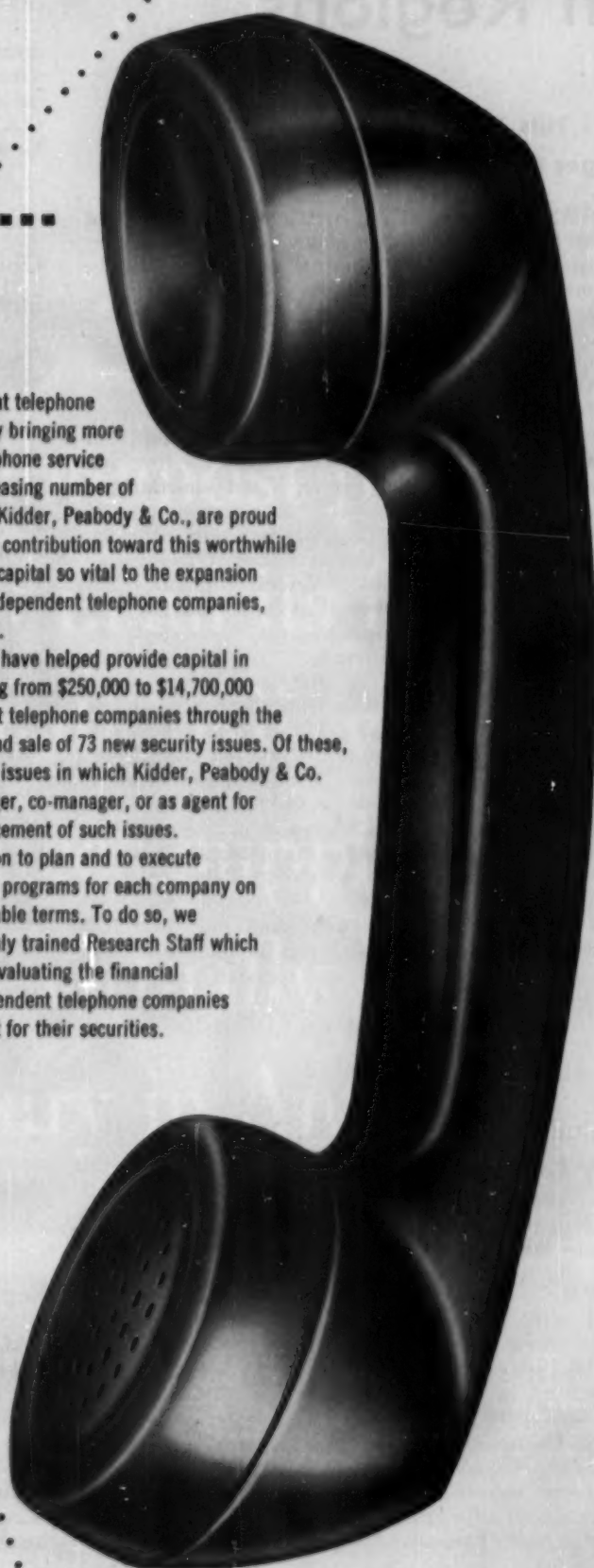
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In Regions

AFL Hits Luring of Industry, Urges Congress to Act

WASHINGTON—The American Federation of Labor this week let loose the findings of a year-long study it has been making into industrial migration. What the report amounts to is this: AFL doesn't like the way some states and communities—especially southern ones—have been luring industry; it wants the federal government to do something to stop it.

AFL points out that in the last 15 years the South and the Pacific Coast have grown far more rapidly than the old industrial Northeast (page 78). It admits that there are many sound economic reasons for this, and that industrial migration, per se, is not something to rail against. But, it says, "in an increasing number of instances . . . migration . . . has not been based on such traditional economic reasons. Rather, it has occurred as a result of various types of financial subsidies. . . ."

This subsidized migration, says AFL, has taken "a heavy toll in terms of unemployment, uneconomic dislocation, and sectional bitterness."

Specifically, it singles out the South's use of tax concessions and the floating of industrial bonds by municipalities to build plants for lease. It says the South has been putting heavy emphasis, too, on cost savings from "substandard wage rates, a submissive work force, and a public opinion openly hostile to unionism."

What AFL would like Congress to do about all this is: (1) Make a thorough study of the problem; (2) remove the income tax exemption on municipal bonds issued to finance plant construction; (3) penalize industries that pay only a nominal rent for plant and equipment to municipalities by disallowing as an income tax expense an amount equal "to the reasonable full rental value of the facilities provided"; and (4) reduce and gradually eliminate regional wage differentials.

Philadelphia Proposes to Open Up City Land for Industrial Growth

PHILADELPHIA—A loss of industry—in the face of general boom in the Delaware Valley—has Philadelphia city officials worried enough to try to do something to stop it.

Over the past three years, 27 companies, employing 4,516 people, have moved out of the city because they couldn't get room to expand within it. While the loss is only 0.5% of the 5,249 companies in Philadelphia, it has been more than enough to concern the city government. The upshot has been a plan that would open up as much as 1,400 acres of city-owned land to provide space for future industrial expansion.

As a start, the city is concentrating on a 125-acre tract at North Philadelphia airport. A proposal to rezone

the land for limited industrial use is now before the city council.

If it passes, the city plans to make an industrial subdivision out of the tract, arrange for railroad sidings, streets, and sewers, and open the land to bids for development. The city planning commission has already O.K.'d a budget request for \$450,000 to cover the outlay for setting up the site.

Ohio High Court Ruling May Doom State's Axle-Mile Truck Tax

COLUMBUS—A special legislative session may have to be called if Ohio is to save its controversial axle-mile tax on trucks.

The State's Supreme Court dealt what may be a fatal blow to the tax when it ruled that the levy couldn't be collected from truckers of other states with which Ohio has reciprocity agreements. These agreements, providing exemptions from highway-use taxes, are in effect with most other states, and Ohio stands to lose millions of dollars in revenue if the decision stands.

The court's ruling came in a case involving Michigan truckers and was based on a 1937 reciprocity agreement between the two states. Although the court didn't say the truck tax was unconstitutional, it did hold, in a 4-to-3 vote, that the Michigan pact blocked its collection. The decision means that the state will have to refund more than \$1-million that it has taken from Michigan truckers since the tax went into effect in October, 1953. On top of this, it will lose another \$2-million in assessments that have not been paid pending a final court decision.


At the moment, the axle-mile tax is yielding about \$14-million a year, with between 35% and 45% of the take coming from out-of-state truckers. State tax officials say reciprocity agreements with other states may not contain the same broad exemptions as the Michigan pact, and therefore not all states may be affected by the decision. But, if that turns out to be true, the question of discrimination is almost sure to be raised.

By last week, Gov. Frank Lausche had met with legislative leaders and said they agreed with him that a special session should be called if the tax has to be modified. The immediate move now, though, is for the attorney general to attempt to get the court to rehear the case.

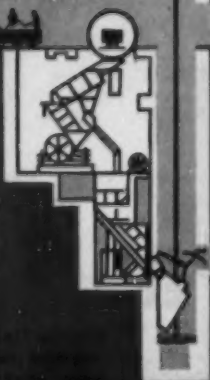
Regions Briefs

Major office buildings—the first to be built in years—will be dedicated in Salt Lake City, started in Cleveland. Salt Lake's 12-story First Security Bank Building, which opens Aug. 22, is the first in 28 years. Cleveland's 22-story skyscraper for Cleveland Electric Illuminating Co. will be the first downtown since 1930.

American Smelting & Refining Co.'s hunt for ore on the grounds of Utah's state prison (BW-Mar.12'55p78) has come to nothing. Drillers found only water.



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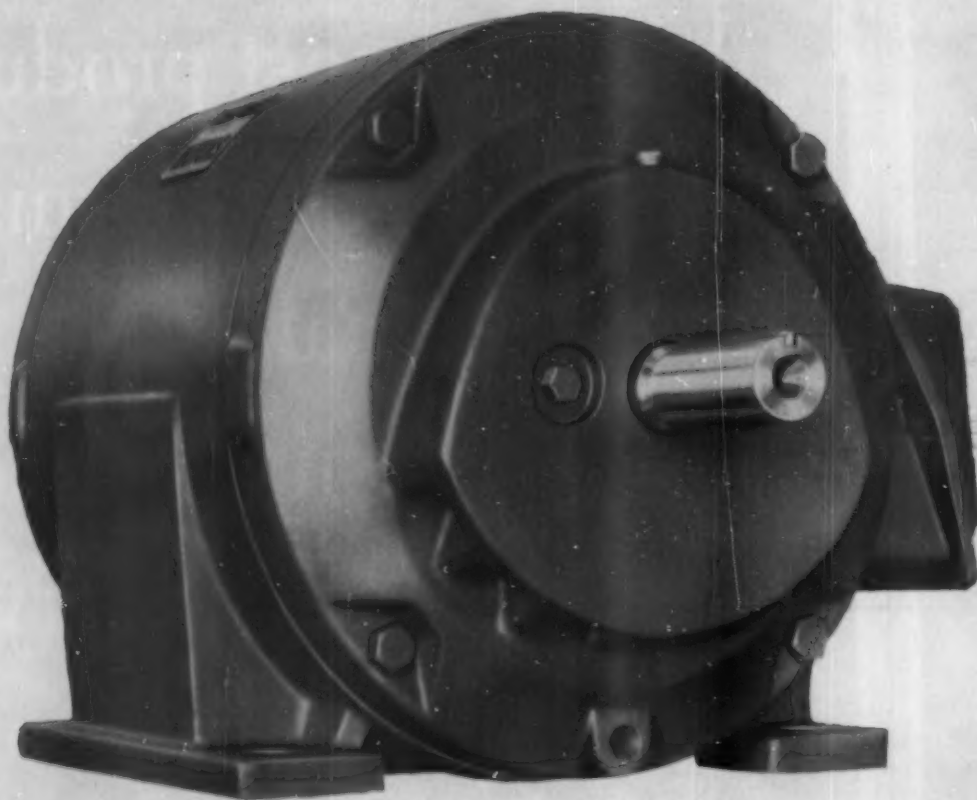
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INTERNATIONAL OUTLOOK

BUSINESS WEEK

AUG. 13, 1955



Washington is a little worried by a rash of proposals for closer "contacts" between the U.S. and the Soviet Union.

"East-West contacts" is the diplomatic name for things like the U.S.-Soviet exchange of farm delegations and for closer trade and cultural relations in general. It was one of the subjects the summit conference talked about. And it's one of the main items on the agenda for the October conference of foreign ministers.

The State Dept. is all for the idea—as long as it is matched by progress in solving major East-West problems. But the thing seems to be gathering a momentum of its own.

Here are three of the proposals for closer economic contacts:

- For a delegation of Soviet agricultural machinery experts to come here to study American production methods. This is a Soviet scheme. •
- For a trade show in Moscow—of U.S. farm machinery and irrigation equipment. The sponsor is Gottfried Neuberger of New York, a specialist in international trade fairs. He is now awaiting a reply from Moscow.
- For officials from the Soviet Ministry of Trade to visit the U.S. and study our marketing techniques. Wroe Alderson, a Philadelphia marketing consultant who is just back from a month in Russia (BW—Aug. 6 '55, p114), is trying to get backing for this in the U.S.

Europe's auto industry, like ours (page 25), keeps right on growing.

• The British industry is pushing plant expansion at a faster rate than it originally planned. Despite rough German competition, exports of all cheaper British models still grow and make up more than half of total output.

The auto makers will spend \$420-million on new facilities over the next five years, and the parts manufacturers another \$336-million. That makes autos the top growth industry in Britain.

• Expansion plans in West Germany aren't so ambitious. But the German leader, Volkswagen, will soon push up its output sharply. VW production of commercial vehicles is being transferred to a new plant, leaving the original Wolfsburg factory free for passenger cars only.

• Fiat, which dominates Italy's industry, has just tooled up to a 1,000-a-day capacity for producing a newly designed midget car. Fiat's domestic demand is rising and exports were at a record level during the first six months of this year.

• There may be more mergers in the French auto industry, like last year's Simca-French Ford amalgamation. Citroen, which is about ready to introduce a new car, is rumored up for sale.

Cotton textile producers in Britain are up in arms at the growth in imports of cloth from India, Hongkong, and Japan. Backed by the labor unions, the mill owners are trying to get public support for a boycott.

The three Eastern countries are easily underbidding Lancashire's greycloth mills. British finishers and printers buy the imported cloths, convert them, and sell them at home and abroad as British textiles.

Imports from Hongkong are 12 times what they were five years ago, from India twice as large. Under the imperial preference treaties signed

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

AUG. 13, 1955

in Ottawa 23 years ago, greycloth comes into Britain duty free. (Japan has more than doubled its sales in Britain without this special advantage.)

The Eden government refuses to resort to new tariffs. That wouldn't make sense when Britain is trying to get other countries to lower their tariffs. Just as important, the government doesn't want to shake the imperial preference system which still is valuable to many British exporters.

U.S. oil companies are still optimistic about someday striking an attractive investment deal in Argentina. But note the "someday." It may be months—even a year—before agreement can be reached.

Early this week an opposition congressman in the Argentine capital leaked details—later confirmed—of a proposition Standard Oil Co. (New Jersey) made to the government Aug. 2. In a nutshell, Jersey would get rights on 11,000 sq. mi. in the Neuquen oil fields (now producing 14,500 bbl. daily). Substantial Jersey investment would be involved, with rights to produce, refine, distribute the oil in Argentina and, eventually, abroad.

The company hazards no guesses as to when—and if—Argentina will buy its scheme. It has been dickering for years, and can afford to wait.

Note the experience of Standard Oil of California. It reached agreement with the Peron government last spring (BW—Apr. 2 '55, p138). But now the contract is bottled up in the Argentine congress, where nationalist opponents call it a giveaway to Yankee imperialists.

The indecision, of course, is partly the result of the foggy political climate following the June revolt attempt against Juan Peron.

But outsiders think that the government is anxious to make an oil deal. And they say that Jersey Standard's proposal is simpler than California's contract, and perhaps not so objectionable to Argentine nationalists.

The Indonesian army has launched a government cleanup now that it has taken the reins of power from the Communist-backed Nationalist Party. Army leaders aim to root out the inefficiency and corruption that mushroomed under the Nationalists.

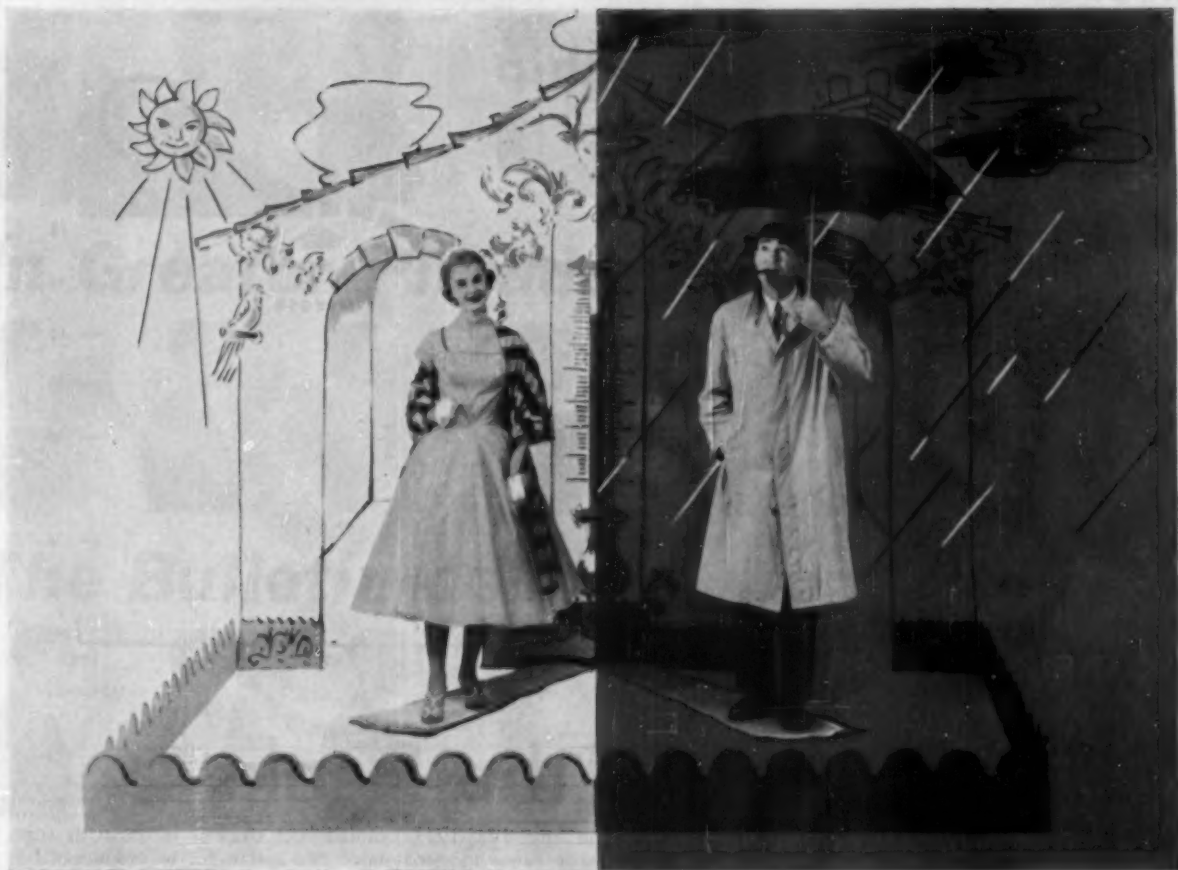
Meanwhile a Moslem-Socialist braintrust is planning an all-out election campaign. The polling is scheduled for Sept. 29, but could be postponed.

The Communists may still pile up a heavy vote. But their Nationalist allies seem headed for eclipse. And without them, the Communist won't swing much weight in Parliament.

Premier Hatoyama is intervening personally to break the deadlock that's holding up the restoration of normal diplomatic relations between Japan and the Soviet Union.

Hatoyama has sent his chief adviser, Agriculture Minister Ichiro Kono, to London where Russo-Japanese negotiators are stalled.

Kono is ready to make concessions to reach agreement with the Russians. He knows that his boss will lose political stock if nothing comes from the London talks. He himself represents important Japanese fishing interests that want Soviet permission to fish off the Siberian mainland.



How to stop moisture two ways — with one packaging film

Is moisture friend or foe of your product? Regardless of whether you want to seal moisture in, or lock it out, there's one packaging film that does both jobs equally well—PLIOFILM.

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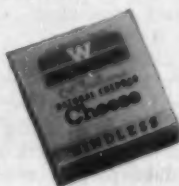
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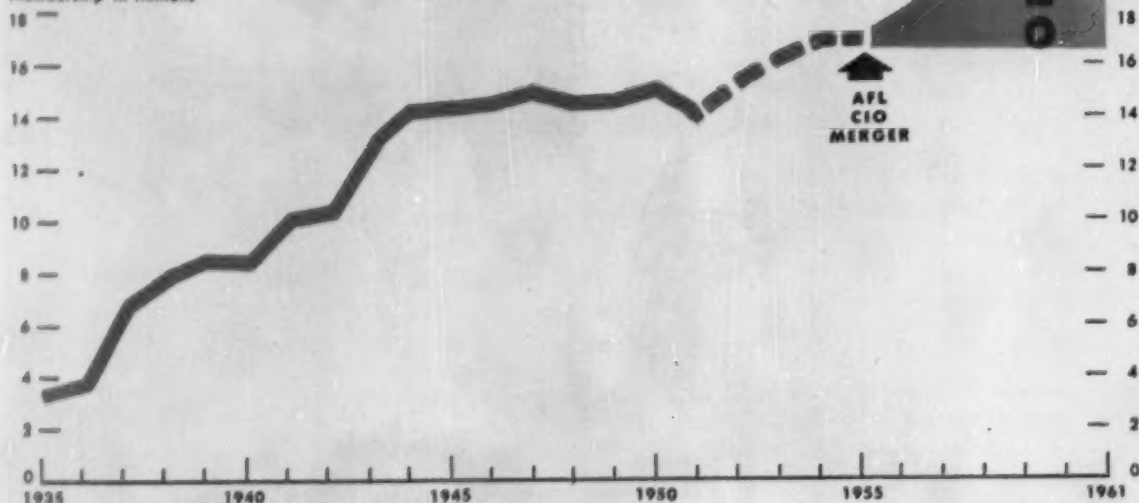
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Total Union Membership

Membership in Millions



(Data: Dept. of Labor; BUSINESS WEEK Estimate.)

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Millions More in the Ranks

The AFL executive council is meeting in Chicago this week, tidying up the last remaining loose ends before the merger with CIO. Discussions in the formal sessions focused on details and constitutional problems. But talk in the air-conditioned bars and sitting rooms of the Conrad Hilton Hotel, where labor's big wheels gathered, was on another plane. For the first time in more than a decade, the federation's chiefs were animated about growth.

The growth they talked about was not the simple and easy addition of CIO's claimed 5-million members to AFL's claimed 10-million, which the merger will effect. It was new member talk; organizing talk. All were assuming that within a relatively short period, the joint AFL-CIO would be larger than the sum of its parts.

Estimates on the expected growth varied widely—from conservative guesses of half a million new members a year for the united labor movement's first three years, to wild notions of doubling the size of the unions by 1960. But while there was a broad scatter in the figures being tossed around, there was virtual unanimity in the opinion that whatever growth came, it would be the result of hard work.

• **Hardheaded Optimists**—Whatever faults the AFL hierarchy may have, impracticality is not among them: The unions are well aware that the Taft-Hartley Act makes organizing more diffi-

cult than it was in the 1935-1945 decade; that new state laws add to their problems; and that most of the work force easily organizable is already in the unions. Nevertheless, they see new reservoirs of enthusiasm, and new resources of funds and manpower opening as a result of the merger—and a wealth of organizing opportunities.

One AFL international union president, when challenged by an outsider about being too visionary for a practical man, responded by waving his hand toward a group of his peers and saying seriously, "Do you think those fellows are any different than businessmen? To be a successful businessman you have to be both hardheaded and optimistic. That's what we are."

• **System for Growth**—In addition to all the general talk about expansion, there were some specifics. And one particular organizing effort now under way got a considerable amount of attention. It's a novel method of organizing that appears to be bearing fruit in a long-dormant area. It results from an agreement between two big AFL internationals, the teamsters and butcher workmen.

Both teamsters and the butchers have long-standing jurisdictional interests in the food processing industry. The teamsters claim warehouse workers and the butchers claim everybody who works near meat, even the girls who watch a boiler in which some dehy-

drated beef stock is mixed with vegetable fats and water to produce a can of consomme. Last fall, the two unions got together and agreed on jurisdictional lines, which up to then overlapped and made trouble. Now they've gone on from there with a joint organizing campaign under Leon Schachter, butcher union executive.

The new organizing technique is an effort to eliminate the high costs of past recruiting drives and in less than six months it boasts of gathering in more than 5,000 new members on a shoestring budget.

Basically, the plan is simple: Use local people to do local organizing. This means using anyone from college students studying labor relations to shop stewards who want to climb up the union leadership ladder. Both have been used.

Still unevaluated because it has cracked only the surface, the system nevertheless is successful enough for the teamsters to be working already on similar deals with the AFL machinists and other unions that cross the truck union's far-flung jurisdiction.

Here's how it works:

• Three-man teams from the teamsters and butchers together plot likely organizing areas, setting up the jurisdictional lines to be held during a joint drive. Two full-time organizers, one from each union, take part in every drive.

• The organizers make contacts



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Thirteen zones, each precisely controlled by Honeywell thermostats, are employed in heating and cooling Sears' Oklahoma City store. Plan detail below shows ground floor thermostat locations. Strategically placed, they compensate for changing factors of occupancy and exposure so that comfort levels are held constant. Called for here was a comfort control installation as advanced as the building itself: Honeywell Customized Temperature Control.



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with union members in the local areas and pick out likely prospects to do the spadework. For each union there's at least one local representative, and these representatives work side-by-side in a plant, selling the merits of both unions.

- When a plant is organized, negotiations are turned over to teamster and butcher members who bargain on wage and benefits scales in that area.

Schachter reports "no failures so far" in half a dozen organizing drives. He writes down success to several built-in factors. One is the defraying of usual organizing costs. Local union people are hired at \$100 a week; college students at \$75 a week, without the usual on-the-road expenses. When the job is done, they return to their former occupations—and the costs cease.

So far, three students have been used; one from Harvard, one from Cornell, one from Penn State. They were carefully picked, residents of the communities where the organizing was done, college-trained in labor relations. "They're eager to get the experience," Schachter says.

More often, however, union members are selected. "This is an opportunity for a guy, a shop steward, say, who wants to be a business agent. He's looking forward to improving his lot, he works like a beaver. He also wants to match his counterpart in the other union. The competition works," according to Schachter.

- **Successes**—The teamster-butcher alliance's work includes signing up:

- 700 workers in Long Island's largest duck processing plant, after a week-long dual union strike.

- A poultry plant in Charleston, W. Va.

- Nine supermarkets in Toledo, Ohio.

- A continuing drive, which has already had some success, is still moving on Maryland's eastern shore, where the unions estimate that out of 3,000 to 4,000 workers only 640 are union members. There's a similar drive going on in the Chicago area. Over-all, the unions claim, a potential half-million workers can still be organized in the fast growing food-processing industry.

So far, the system has been focused on the soft spots. The joint committee goes to work only after word from local people that non-union workers can be approached. The field is barely scratched so the system is still on trial.

Butcher-teamster officials call the system a new "secret weapon." Certainly it's the most successful organizing weapon found in all the mutual union alliances that have been made in the past few years. In most team-ups, such as pacts between the CIO auto workers and AFL machinists, the parties concentrate on keeping out of each other's jurisdictions.

This may be a portent of things to come after the AFL-CIO merger. Joining at the top will not automatically bind the affiliates to joint action, but if rival unions in the same area combine in organizing drives, it may provide the

key to open the big unorganized territory still facing union labor. But AFL and CIO are determined to do a great deal to alter the fact that less than a quarter of the U.S. work force now carries union cards.

Pioneering on Welfare Funds

Washington, the first state to put its new welfare fund law to work, may be trail blazer for the rest of the nation's labor lawmakers.

There's some social and legal pioneering getting under way this week on the West Coast. There, the state of Washington's Insurance Dept. has just begun administering the nation's first welfare fund law.

The law makes mandatory the full, public, and regular disclosure of the finances of funds operating within the state. It could be the pattern for other similar laws now that state legislatures around the country—and congressmen at the nation's capital—are looking deeper into the question of regulating welfare funds.

- **Wide Range**—Welfare funds is the generic title of a wide variety of arrangements between unions and employers that provide a host of welfare benefits for employees at the employer's full or partial expense.

Chief among the benefits are medical insurance, hospitalization, surgical care, and life insurance.

In the last five years the funds have grown phenomenally—in number, in coverage, and in size. At the same time, scandals involving a few funds have raised these pointed questions: How far should the funds be regulated? And who should regulate them—federal or state lawmakers, or both?

Since the first revelations of corruption, many states have investigated the funds in great detail. Some of these investigations have been pointed toward eventual legislation. But the state of Washington is first with the actual enactment of a welfare fund statute.

Main support for the measure came from the Washington State Federation of Labor. For two years the federation has been advising union locals how to run welfare funds, and in this time it has found a number of loose practices that could lead to unsavory ends. So, the federation urged legislation that would bring loose practices into the open before any dishonesty occurred.

- **Senate's View**—While the Washington State Insurance Dept. is getting to work with the new law, the possibility of federal legislation on health and welfare funds looms larger. This was clear from the second interim report that was issued by the Senate Subcom-

mittee on Welfare Funds & Pensions.

Subcommittee Chmn. Paul H. Douglas says the group's hearings in March and April turned up irregularities that show "There is an imperative need for federal legislation which would help to safeguard the interests of the intended beneficiaries and prevent breaches of trust and exploitation by unscrupulous individuals." And, signaling the intent of Congress when next year's hearings are over, Douglas adds, "One of the most widely supported proposals would require such plans to disclose the essential facts of their operation to an appropriate government agency and to participating employers and employees."

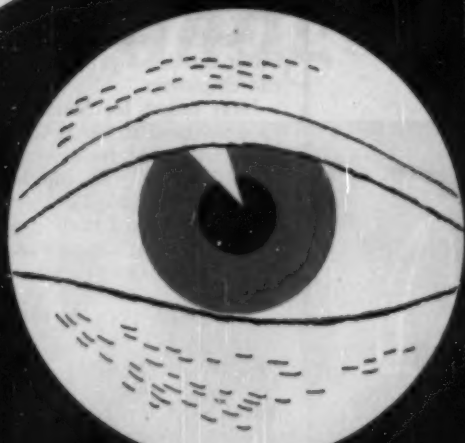
- **Both Sides**—The Douglas report tries to put the problems in perspective. It cites cases of exemplary conduct by unions and companies as well as cases where there was "flagrant disregard" of the nominal legal restrictions covering welfare funds.

Outstanding violators singled out by the subcommittee were:

- A 65,000-member laundry workers' union fund, operating in Indianapolis from which nearly \$1,000,000 was embezzled in a three-year period. The report shows that the fund was set up in 1950 with employer contributions going into a group of insurance policies controlled by Louis B. Saperstein, a Newark, N. J., broker. According to the report, Saperstein embezzled \$900,000 by keeping a portion of the funds forwarded to him.

- A local of the Pointers, Cleaners Caulkers union, affiliated with the Bricklayers, Masons & Plasterers (AFL), that failed to account for \$220,000 in withdrawals from its welfare fund. The report charges that an employers' association paid 74¢ an hour for each employee into the fund "without benefit of any written agreement and without joint administration as required by law," in the Taft-Hartley Act.

Praised in the report were funds covering members of 26 locals of the Brotherhood of Painters, Decorators & Paperhangers (AFL) and Local 502 of Cement & Finishing & Composition & Floor Finishers union, both in Chi-



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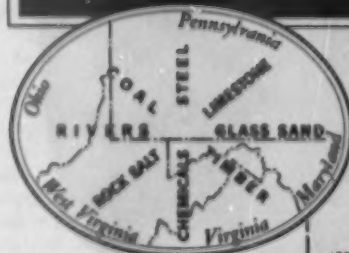
Look into offers being made by some of the progressive medium-sized communities we serve in Maryland, Pennsylvania, West Virginia, Ohio, and Virginia.

These communities want to assist you in adapting an existing building to low-cost production of *your* products—or in building a new plant to your specifications. New plant or modernization, they may be able to help finance the whole operation—and probably at less cost than you'd otherwise pay. Most community development organizations work on a non-profit basis.

What's more, you'll be dollars ahead in *reduced operating costs* after you move in. Many materials you need for successful manufacturing will be right in your own backyard. You save three ways: (1) reduced inventory (2) lower shipping charges (3) more productive labor. Ask us to prove it. Phone our Area Development Department—Whitehall 4-3740—or send in the coupon below.

Monongahela Power Company • The Potomac Edison Company • West Penn Power Company

West Penn Electric System



West Penn Electric System, Room 906
50 Broad Street, New York 4, N. Y.

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cago. In these cases both company and union officials closely guided the funds and made periodic public audits, so that the funds "helped to make for better relationships between employers and employees."

Next target for Senate and House Labor Committee investigators will include the giant funds of the United Mine Workers and the International Brotherhood of Teamsters (AFL). Douglas has told both unions they'll be called for examination of their fund operations. He sent an informal request to John L. Lewis' mine union to furnish details of its \$100-million welfare fund, but this was rejected, so a full-scale investigation has been ordered.

• **Rules**—The state of Washington's new law includes the principle of disclosure suggested by Douglas and AFL and CIO. Under it, the state insurance commissioner can examine any welfare fund whenever he wants to but he must examine each fund at least once every five years.

Fund trustees must keep full records and file the papers establishing the funds with the Insurance Dept.

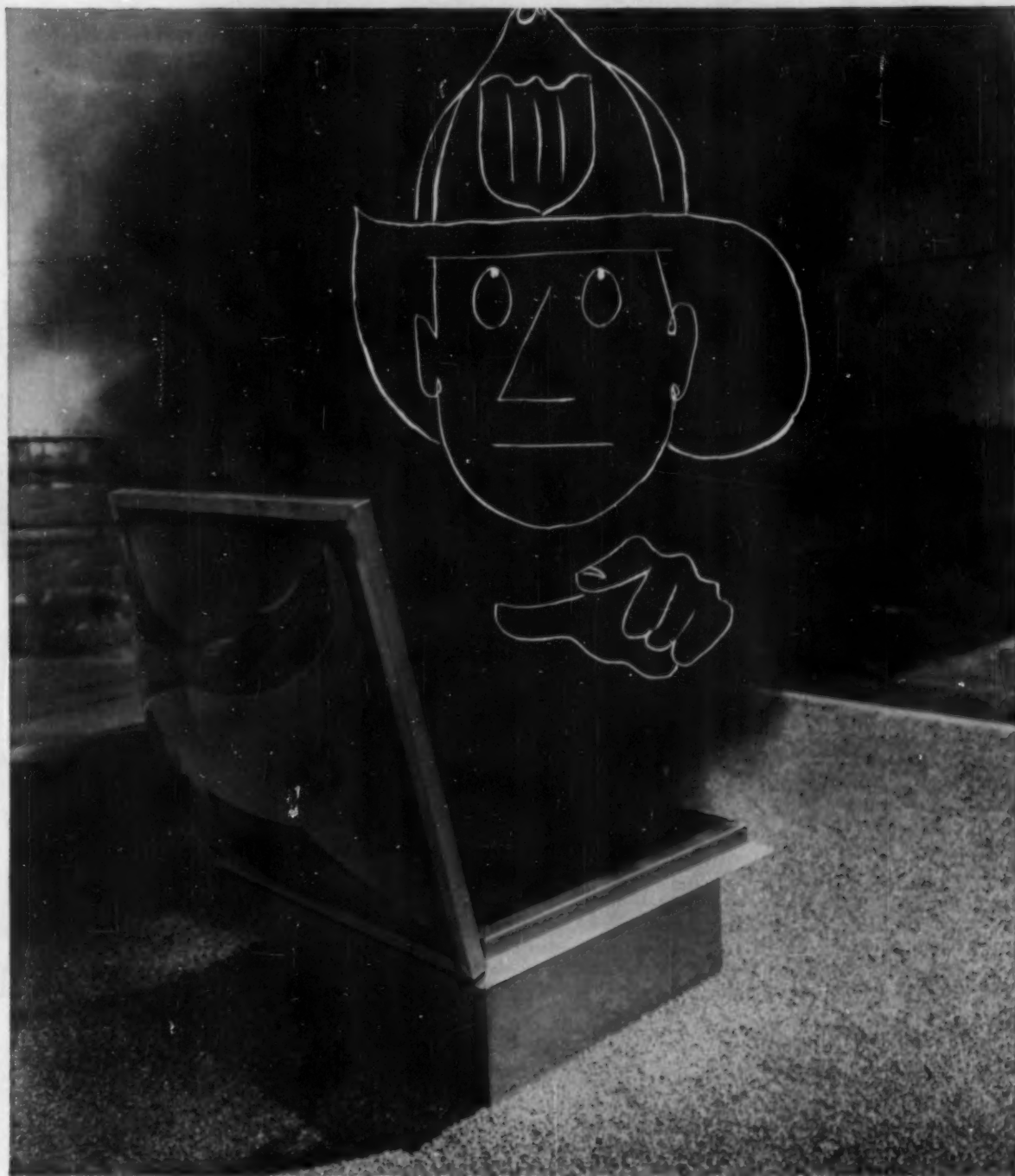
The insurance commissioner keeps all these in his office for public inspection. The rules apply to insurance carriers. They must give the commissioner a complete copy of every contract for health services. State officials point out the importance of the words "complete copy." Previously, when required to file information, insurance companies would write "as agreed upon" in the space for contract terms. This made any detailed examination of the contract almost impossible. Now, these companies must file the whole contract.

To prevent fee-splitting, where some of the fee may get into the hands of fund trustees, the Washington legislators ordered each insurance carrier to file a statement of all commissions and fees plus a list of persons to whom payments were made.

The new law irked some banks. They opposed it because it makes their pension fund accounts subject to examination by the Insurance Dept. as well as by regular bank examiners. Washington's Gov. Arthur Langlie vetoed the original bill because of this. So when the bill came up at a subsequent special session a clause was inserted exempting banks and other institutions already subject to inspection.

Washington's law is similar to many laws introduced in state legislatures this year; some of them failing by the narrowest of margins. With apparent support from labor and management, with federal action pending, and with one state already through the barrier, welfare fund legislation now seems likely to meet with more success in next year's state legislative sessions. **END**

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Automatic fire venting with WASCOLITE PYRODOMES could mean the difference between damage and disaster in institutions, commercial and industrial buildings.

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technique today! For literature, write to our Engineering Division, Fire-Venting Service, Dept. B8.

WASCO PRODUCTS, INC.
Bay State Road • Cambridge, Massachusetts

One Man Takes on GM, UAW

Trouble erupted in an unexpected place this week over the full union shop the CIO United Auto Workers negotiated with General Motors Corp. as part of the deal establishing supplementary unemployment pay.

A non-union worker in GM's Allison Div., Indianapolis, sued for an injunction to prevent GM and UAW from putting the union shop into effect in Indiana.

If he wins, an estimated 7,000 non-union workers in eight GM plants in Indianapolis, Kokomo, Anderson, Muncie, and Bedford won't have to join the union. (GM has more than 37,000 employees in Indiana.)

If he loses, nearly all of the 7,000 will join, reluctantly, in order to keep their jobs.

Whichever way it goes, the case is almost certain to be appealed from the court of Superior Judge Walter Pritchard of Marion County to the Indiana Supreme Court.

• **United Front**—As co-defendants, GM and UAW are fighting side by side. They argue that the union shop they negotiated in the June 12 contract is lawful.

They point to a contract section that exempts workers from joining the union if their state has a right-to-work law or otherwise "makes unlawful, membership in a labor organization as a condition of employment."

Indiana has no right-to-work law.

But the worker, Vernon R. Smith, who filed the suit, contends that the state's "Little Norris-LaGuardia" anti-injunction act covering strikes and the state constitution has the same effect as a right-to-work law.

• **Chapter and Verse**—Smith's lawyer, George Rose, interprets a clause in the "Little Norris-LaGuardia" act as banning compulsory unionism. The clause says, "... he [the individual worker] should be free to decline to associate with his fellows."

The lawyer also cites the Indiana constitution, which declares that its citizens have the right of "life, liberty and the pursuit of happiness."

Lynville G. Miles, UAW regional attorney, counters that the "Little Norris-LaGuardia" act prohibits coercion and interference with a worker in the selection of a bargaining agent. But it does not extend to terms and conditions of employment—such as a union shop, he adds.

• **Dissenter**—Smith, 40, an assembler in the experimental department, has worked at Allison since Feb. 14, 1941—

except for 22 months in the army in World War II.

UAW Local 933 has been bargaining agent for the 8,500 Allison workers since Nov. 15, 1954.

Smith never has belonged to the UAW. He was one of the 1,898 Allison workers recently notified by GM and UAW to join the unions by Aug. 26 or be fired under the union shop.

Smith gets \$2.27 an hour and likes his job. He doesn't believe that anyone in America should be compelled to join anything, especially a union. So he sued. Beyond being a GM employee,

he owns the Fern Hills Health Camp, a 160-acre nudist colony, near Bloomington, in southern Indiana.

Smith dislikes UAW because, he says, it has done nothing to have him and fellow non-union workers in the experimental department of the aircraft jet engine and transmission plant reclassified as skilled mechanics at higher wages.

He also believes that the UAW is much too violent in its strikes.

Employers in 28 other states that have Little Norris-LaGuardia acts are watching the case, which will serve as a guide.

Union Uses Ads to Plug SUP

CIO electrical workers want to get appliance dealers on their side as they go into supplementary unemployment pay negotiations with GE and Westinghouse.

With contract deadlines just a month away, the CIO electrical workers' union is trying some brand-new strategy to win supplementary unemployment pay in the electrical manufacturing industry.

The new tactic is to gain support for the plan within the industry itself. It's directed at the electrical appliance dealers who sell the products of the big companies such as General Electric and Westinghouse. The union uses the advertising channels most likely to reach these dealers.

In trade magazines directed to the dealers, the CIO union this week launched an advertising campaign extolling the virtues of guaranteed pay as a means of increasing dealers' sales in the electrical industry. A series of four ads is scheduled to run until the Sept. 15 contract deadline with GE. The union's contract with Westinghouse expires Oct. 15.

So far, IUE officials have drawn only signs of hostility from GE on its SUP plan, which closely parallels the agreements negotiated by the CIO Auto Workers. GE says it sees no merit in the argument for pattern settlements.

• **The Pitch**—The advertising appeal is an extension of the union argument that workers must have steady pay to buy electrical appliances; when layoffs come, buying ceases, and appliance dealers lose business.

In its first offering, printed in Retailing Daily, the IUE says an SUP agreement means better business for the

dealers, both from the workers and from the electrical companies.

Under a large picture, showing an appliance dealer removing a television set under the sorrowful view of a worker, his wife, and son, the ad warns: "No more Howdy Doody for Johnny." It goes on: "This TV set got laid off because his dad doesn't have guaranteed employment."

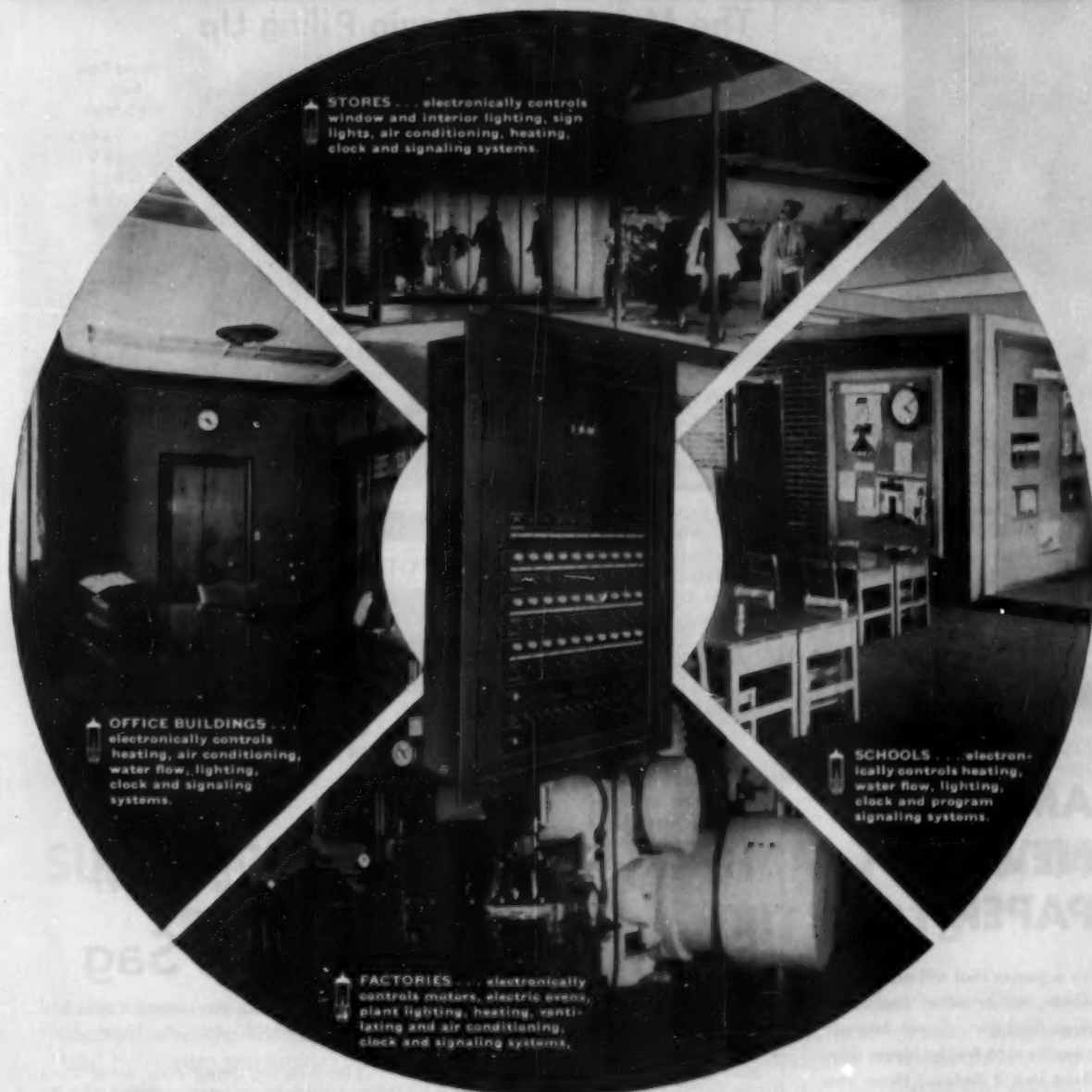
"Workers with empty pockets can't buy new appliances or keep up payments on old ones," the union says. The ad concludes:

"And we believe that when appliance manufacturers have to hire by the year, they'll plan by the year. So a guaranteed employment plan for factory workers would also help smooth out some of the valleys in your own retail operation."

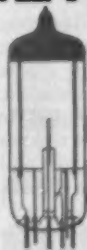
• **What Effect?**—IUE officials expect the appeal to carry weight with the dealers, particularly in the cities where electrical companies have their largest plants. They term it an "unprecedented step in union public relations."

At GE, comment was not available. But some retail experts wonder if the campaign may boomerang. Year-round, level production of appliances may produce contra-seasonal inventory gluts, which dealers might be forced to carry. Dealers already maintain that manufacturers overload them out of season. They wish for more output, but want it delivered to them when the customers want it. **END**

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Every minute of the day, this amazing electronic system automatically controls as many as 40 remote operations in your building. Lights, motors, air conditioners, heating systems, valves, or any other electrically operated function may be operated on the schedule you select.

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For details, write for free booklet: Time Equipment Division, International Business Machines Corporation, 590 Madison Ave., New York 22, N. Y. @1954

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SPECIAL PAPERS FOR INDUSTRY

THE MARKETS

The Minus Signs Begin Piling Up

| | 1955 High | Tuesday Close | Percent Loss from 1955 High |
|--------------------------------|--------------|------------------|-----------------------------------|
| Allied Chemical | \$122.75 | \$106.00 | -13.6% |
| Amerada Petroleum | 115.25 | 93.50 | -18.9 |
| Armstrong Cork | 35.25 | 28.00 | -20.6 |
| Atchison, Topeka & S. F. | 151.00 | 131.50 | -12.9 |
| Atlantic Coast Line | 59.50 | 44.75 | -24.8 |
| Bethlehem Steel | 160.75 | 143.50 | -10.7 |
| Chrysler | 92.75 | 83.87 | -9.6 |
| Cincinnati Milling | 75.00 | 62.62 | -16.5 |
| Container Corp. | 80.00 | 67.00 | -16.3 |
| Denver & RGW | 43.37 | 37.00 | -14.7 |
| Dixie Cup | 64.75 | 52.75 | -18.5 |
| E. I. du Pont de Nemours | 249.75 | 214.62 | -14.1 |
| General Motors | 138.00 | 129.00 | -6.5 |
| Goodyear T & R | 66.25 | 53.50 | -19.5 |
| Illinois Central | 68.37 | 58.75 | -14.1 |
| Johns-Manville | 97.00 | 85.25 | -12.1 |
| Minnesota Mining | 115.00 | 99.00 | -13.9 |
| New York Central | 49.50 | 44.62 | -9.9 |
| New York N. H. & H. | 39.00 | 35.00 | -10.3 |
| Pennsylvania RR | 30.37 | 26.75 | -11.9 |
| Philco | 43.37 | 36.00 | -17.0 |
| Radio Corp. | 55.37 | 46.50 | -16.0 |
| St. Louis, S. F. Ry. | 34.87 | 30.12 | -13.6 |
| Standard Oil (Calif.) | 98.75 | 88.50 | -10.4 |
| Union Carbide | 102.75 | 93.37 | -9.1 |
| Union Pacific | 178.00 | 157.00 | -11.8 |
| U. S. Steel | 57.50 | 50.87 | -11.5 |
| Western Pacific | 73.87 | 56.75 | -23.2 |
| Westinghouse Electric | 83.25 | 64.25 | -22.8 |
| Worthington | 59.50 | 48.62 | -18.3 |

Even the Blue Chips Sag

The daily chummings of the bull market have rather obscured one startling fact: Many issues, among them the very blue chips that have powered the market, are well below their 1955 highs.

Market analysts are already in a dither over Tuesday's sharp drop, when Standard & Poor's average of 50 industrials fell 6.2 points. The fall brought into clear focus the discouraging performance of the market, for all its little daily flurries and temporary rallies.

The 50 industrials are down 5% from their 1955 high, with 4.7% of the loss suffered since the end of July. The same pattern holds for the 20 individual industrials and the 10 rails in the tabulation above. They show losses ranging from 6.5% to 24.8% from their highs for the year—and much of the loss has been in the past two weeks. Indeed, such stocks as West-

inghouse, Philco, Armstrong Cork, and Illinois Central are at their 1955 lows.

The rails are doing even worse than the industrials. At midweek S&P's index of 20 rails was at its lowest point since early April, 9% below the year's high.

All this slide in the market has come in the teeth of fine news about earnings, dividends, and the prospects of a good second half. That's because these factors had already been discounted by the sharp rise earlier. Now, the tightening of credit is the heaviest weight pulling down stock prices. Tuesday's slump is generally blamed on this week's closed door conference of the Federal Reserve and finance company officials on consumer credit. Another depressing element appeared Monday, when brokers' loan rates were boosted again, to 3½% from 3¼% (page 124). **END**



FROM PLANES



TO PLAINS



TO TRAINS

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to see how Sun Industrial Petroleum Products
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You're there

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Capture the most personal of all advertising space—your customer's pocket.

Whatever you select to fill this space becomes a part of him. Wherever he goes, you're there with a friendly reminder of you. Your advertising is first in his pocket in the morning, last out at night, round the clock, building preference for you.

Shaw-Barton has created exclusive advertising specialties in leather and plastic to help you win this space. Complete details in our new Pocket Plan portfolio. Ask your Shaw-Barton representative for a copy ... or write Dept. B-85.

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21 Models From
1 to 90 c.f.m.

Report on Big Board Trading

New York Stock Exchange's study of two days in June shows a drop in margin transactions since Federal Reserve jacked up the requirements.

This week the New York Stock Exchange released its findings based on the fifth study of two days' trading on the Big Board. The welter of statistics making up the study were gathered from partners and representatives of Big Board member firms for trading on June 8 and June 15.

Both days were good ones for the bull market. Standard & Poor's combined index of 50 industrials, 20 rails, and 20 utilities was up 2 points on the 8th, and up 2.5 on the 15th. These two days showed the biggest plus signs of any two-day study yet. Volume was good on both days, too, with 3.3-million shares reported on the 8th, and 2.7-million on the 15th.

The study focused on three areas: the extent of credit in the market, the activities of the lower income investor, and the influence of institutions.

• **Margin Trading**—Trading on margin has been hogging the spotlight since the first of this year. And as brokers' loans and market credit boomed, the Federal Reserve moved this spring to cut down excesses in margin trading. It did this with two small boosts in margin requirements, the net effect being a jacking up of margin requirements from 50% to 70%.

The Big Board's previous study of trading was for Dec. 8 and Dec. 15, 1954. So Wall Streeters and investors throughout the country have been waiting to get some idea of the effect of the margin hikes. The exchange broke its figures down more thoroughly than ever before subtracting cash transactions processed through margin accounts. Thus direct comparisons weren't possible. But, nevertheless, the Exchange estimates that the level of margin trading was around 10% below December's mark. Margin trading was 24% of all shares traded in the latest study, with about 40% of all trades by public individuals on margin.

Besides discovering that 19% of transactions in margin accounts were actually full cash trades, the Exchange found that about 40.8% of all margin transactions were for long-term investment—over six months.

• **Motivation**—The breakdown of transactions by motives—trading, short-term investing and long-term investing—may be a little misleading, as Wall Streeters have pointed out in the past. For instance, the latest study shows that 57% of all shares traded by public individuals (excluding investment trusts,

banks, brokers, and dealers) were for long-term investment. This is slightly higher than the 55.6% in December, but below the levels in the three previous studies. Short-term investment, for 30 days to six months, accounted for 28.5% of individuals' transactions, the highest mark ever. And trading accounted for 14.5%, second only to December's 16.6%.

Streeters have been quick to point out, however, that the motive given for purchasing a stock may not actually be realized. If a stock bought for long-term investment should suddenly double its market value, and possibilities of holding the gain for long seemed scant, the investor might be inclined to turn a quick profit.

• **The Little Investor**—The study turned up the fact that the little investor—one with a yearly income under \$5,000—figured less prominently in the market than previously. His participation has waned steadily from 8.9% in September, 1952, to 7.0% last December, and to 5.9% in June of this year. On the other hand, the "middle investor"—in the \$10,000 to \$25,000 class—has emerged to account for the lion's share of trading by individuals. In June, this group accounted for 36% of share volume, compared to 33.8% in December, and 31.1% in 1952. Stock purchases by investors in the \$5,000 to \$10,000 bracket and those making \$25,000 and over have stayed fairly steady since 1952, at around 26% and 32.6% respectively.

Not only has the lowest income group slacked off its buying, but it cut back sharply on its margin business since December. In December, 41% of all buying by the group with incomes under \$5,000 was on margin, but only 30% was on margin in June.

• **Role of Institutions**—Institutional buying climbed from 13.6% of total share volume on the Big Board in December, 1954, to 15.5% in June. This was not so high a percentage as either the 19.2% in March, 1954, or the 20% in September, 1952. But there was one interesting facet of institutional activity in June: With both days registering sharp gains in the averages, institutions were sellers, on balance. This has been true of every study except one—in March, 1954, institutions were buyers on balance, purchasing 65,000 more shares than they sold. One of those days saw the sharpest drop of any day yet included in the studies. **END**



Station #304 of the Texas Illinois Natural Gas Pipe Line Co., Marshall, Texas

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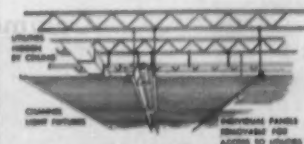
The gas engine-compressor units used in pipe line stations make a terrific noise. Equipment operators subjected to its full force would suffer seriously in comfort and efficiency. The Texas Illinois Company sought the best solution — found it in ReynoCoustic.

This aluminum acoustical system combines maximum sound ab-

sorption with long life and minimum maintenance. It has an excellent fire spread rating — Underwriters' Laboratories label on each shipment.

The installation shown is so successful, the Texas Illinois Natural Gas Pipe Line Co. is using ReynoCoustic in seven more stations. Consider this superior treatment wherever you have a noise problem.

A complete installation service is available. For name of nearest franchised acoustical applicator, call the Reynolds office listed under "Building Materials" in classified phone books of principal cities. For complete literature write to Reynolds Metals Company, Building Products Division, 2021 South Ninth Street, Louisville 1, Kentucky.



In the pipe line station, ReynoCoustic panels were laid on roof girders. Above is a more typical installation — panels laid horizontally on T channels, forming a suspended ceiling with ready access to utilities above. Noise reduction up to .90, uniformly high at all frequencies.

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BUILDING PRODUCTS

This announcement appears for purposes of record.

Reynolds Metals Company

\$155,000,000

First Mortgage Bonds, Series A, due June 1, 1980

\$80,000,000

Bank Loan evidenced by Notes due 1956-1960

*The undersigned have acted for the Company
in arranging this financing privately.*

Dillon, Read & Co. Inc.

Reynolds & Co.
Incorporated

July 29, 1966

*This announcement is neither an offer to sell nor a solicitation of an offer to buy these securities.
The offer is made only by the Prospectus.*

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Common Shares

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Price \$43.92 per Share*

*Price for single transactions of less than 1,000 shares. Prices are scaled down for single transactions involving greater numbers of shares.

Copies of the Prospectus may be obtained in any State only from each of the several Underwriters, including the undersigned, as may lawfully offer the securities in such State.

LEHMAN BROTHERS

August 3, 1966.

Wall St. Talks . . .

. . . about copper price
hike . . . boost in margin trad-
ing costs . . . bursting bubbles
. . . Bolivian oil deal.

Copper shares continue to ignore the market's recent weakness. The reason is rumors of a copper price hike, which probably would jump prices from the prevailing 36¢ per lb. figure to 40¢.

Samplings from the latest Street crop of merger rumors: Georgia-Pacific Plywood and International Paper; Melville Shoe and Edison Bros. Stores (big retail shoe chain); M. Lowenstein & Sons and Reeves Bros., two prominent textile units.

Margin trading costs have been boosted again. The interest rate on broker-dealer loans has been hiked the second time in two weeks by leading Manhattan banks. Their charge now is 3 1/4%, compared with the 3 1/8% previously prevailing and the 3% assessed for over a year until July 27. This will promptly raise the interest charge assessed by brokers on the loans involved in margin accounts, since margin traders usually have to pay the bank loan rate plus a service charge.

One facet of the stock market picture is worrying smart market technicians. It's high hopes motivating buy orders based on rumors of mergers, stock splits, dividend hikes, and the like—and the chagrin so quickly translated into "at the market" selling orders when these events fail to materialize, or when the rumor proves true but results fall short of expectation.

One money market expert advises: "Don't expect for some time hence anything but temporary price rallies in the bond market (page 98). The powers that be will permit additional expansion in bank credit and thus in the money supply. But any increase seen in the latter will be less than the demand for credit you will see flooding in from all quarters."

Glenn McCarthy, Inc., the current vehicle of Houston's up-again, down-again wildcatter, was in sore straits recently when the Keljikan Commercial Corp., New York export-import house, offered \$2-million for a half-interest in its 970,000-acre Bolivian oil concession. When McCarthy asked stockholders to approve that deal, he said a recent audit had revealed the company's bank balance had shrunk to \$53.38.

Like the submerged $\frac{3}{4}$ of an iceberg, the important part of each SKF bearing is value you cannot see...

- the value of prompt product-design assistance from SKF's field engineers in your area—the most experienced in the industry.

- the value of additional help from SKF home office specialists in your industry.

- the value of unbiased recommendations, possible because SKF makes both ball and roller bearings.

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aren't so big...
if they're the **LAST COST***

First cost isn't everything! What really counts in most cases is not how much a thing costs when new, but how long it lasts; how *little* it actually costs when reckoned in terms of extra years of service.

That is where Allegheny Metal jumps to the head of the class. Stainless steel is a package of built-in advantages you just can't match anywhere else. No other commercial material is at once as hard, strong and lastingly beautiful—

as resistant to heat, wear and corrosion—as simple and inexpensive to clean and maintain.

To top it off, Allegheny Metal is easy to fabricate, and we produce it in every shape or form a fabricator may require. Check up on its money-making possibilities for *you*, either in your products or your equipment, and call in our engineers for any help you may need. • *Allegheny Ludlum Steel Corporation, Oliver Bldg., Pittsburgh 22, Pa.*

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Allegheny Metal

Warehouse stocks carried by all Ryerson steel plants



PERSONAL BUSINESS

BUSINESS WEEK

AUG. 13, 1955

A BUSINESS WEEK

SERVICE

Every taxpayer can learn a striking lesson from the current television quiz program, *The \$64,000 Question*.

The lesson is simple and unpleasant: You must pay a tax on all that you win in anything that even remotely resembles a contest. And the more you win, the greater the part of it that goes for taxes.

For example: Say a single person with no other income successfully answers the \$64,000 question. By the time the U. S. Treasury gets finished with it, it turns out to be only a \$27,800 question for the winner—Uncle Sam has the other \$36,200.

It's important to remember that nearly all such winnings are taxable. This is true even if you do nothing to win the prize, such as simply answering the telephone and finding yourself given money.

Congress pinned this down last year when it changed the tax law. To clear up confusion on the point, it specified that all such financial or property gains would be taxed—unless they met each of these three restricted rules:

- The award was given for achievements in the fields of religion, science, education, art, literature, charitable services, or civic affairs, and—
- The winner was selected without any action on his part, and—
- He will not have to perform any substantial future work in order to win the prize.

Good examples of this kind of tax-free award are the Nobel and Pulitzer prizes; they are not based on contests, and they meet the above rules.

(Note that the contest aspect immediately knocks out the tax-free provision even in the approved fields. Thus a composer who writes a symphony in a contest sponsored by a philanthropist will have to pay tax on the prize he wins.)

Obviously the chances of winning any kind of tax-free award or prize are pretty slim. To show just how broad the new law is on this point, here are some examples of the kinds of such gains on which you must pay tax:

- Collections in cash or property from any kind of radio or TV contest, or any giveaway program.
- Any door prize you get.
- An award that comes from winning an essay contest.
- Getting a prize from your employer for having the biggest sales record, the best production record, or for any other achievement in connection with your job. (These awards are taxable even if given to a member of your family rather than to you personally.)
- And you must even pay a tax on any treasure trove you might find. (Its value is taxed income in the year you get undisputed possession of it.)

Often a prize is made in property rather than cash—for example, you hold the lucky number in a raffle for a new car. In this case, how do you figure the tax you owe?

It's based on the fair market value of the car at the time you win it. And you can find that value by finding out what it would cost you to buy the car yourself.

But a recent tax case tempered this rule—and knowing this might come

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

AUG. 13, 1955

in handy if you have a child who wins a big prize. On the basis of the rule, a person should be taxed only on the price of similar goods that he could afford to buy.

For example: Say someone wins a round-the-world trip. He couldn't afford to pay for such a trip on his own. So he might be allowed to pay tax on a lesser figure because of his financial status.

In the case that established the rule, a winner in a radio contest got a cruise to South America. The tickets were nontransferable and cost around \$2,200. The court said they were worth only \$1,400 to the winner. The reasoning: Since they did not give him something he needed in the ordinary course of his life, they weren't equal to their retail value.

—●—

Mexico City is getting increasingly popular with Americans as a vacation spot—partly because in the summer they can sleep there under two blankets.

The high altitude (7,000 ft.) gives a midsummer temperature range of from 48 to 75 deg., even though it's in the same latitude as the Sahara Desert. (Other parts of Mexico are as hot as you would expect them to be.)

September is a particularly good time for Mexican travel. Accommodations at first-class hotels (double room: \$8 to \$12) ease up then—although you should make advance reservations through a good travel agency. Mexican Independence Day, Sept. 15 and 16, is Mexico's "Mardi Gras."

From Mexico City, you can make one-day side-trips to such places as Cuernavaca (Indian ruins), Taxco and Guanajuato (Mexican colonial architecture), and the famous sea resort of Acapulco.

You'll need light woolen clothes and a raincoat in Mexico City (it usually rains daily from four to six p.m. from May through October). Neither men nor women should wear hats, white shoes, or shorts in Mexico City; natives frown on them. But shorts are the rule at Acapulco.

Once you get to Mexico City, be sure to buy a copy of *Guide to Mexico City*, by John Wilhelm. It's written for Americans, does a thorough job of telling what to do and how to do it.

—●—

Timing is important in starting a new lawn. About Sept. 1 is the best time to sow seed in upper New England and the North Central states; Sept. 15 for Middle Atlantic and Central states. Farther South, wait until the weather cools.

—●—

An attractive exterior doesn't necessarily mean a good motel. It should be off the highway, away from traffic noise. Look for a paved driveway (important in bad weather), make sure the rooms have window or door openings on at least two sides. And walls should be thick enough to provide at least some soundproofing.

—●—

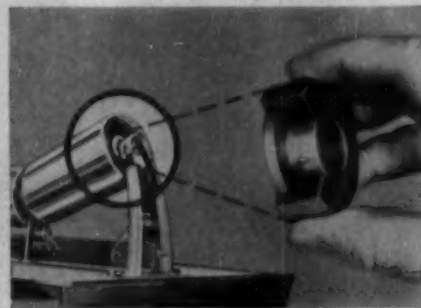
Manners and modes: Dining out in cities will cost you 10% more during the last half of this year—and there may be another 10% boost in 1956. . . . Do-it-yourself has boomed paint sales to new highs; 71% of home interior painting is done by the family. . . . It's claimed that frozen orange juice stored in a freezer will keep its quality and flavor for a year—but it will last only a week in your refrigerator's ice-cube compartment.



Link-Belt reclaiming belt conveyor, with 140 of its 230-ft. length in tunnel, handles aggregates for a leading sand and gravel firm. Link-Belt makes all components and related equipment plus industry's most comprehensive line of idlers.



Sand is distributed to individual molders' hoppers at this mechanized foundry by Link-Belt flat roll belt conveyor equipped with plows.



Longer idler life is assured by unique Link-Belt idler grease seal, proved to be industry's most compact and effective.

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EVERY year the tremendous cost-cutting potential of belt conveyors is being extended to longer, larger and more demanding installations. Spanning rivers or crossing mountains...traveling through tunnels or bridging city streets, their light, adaptable structures can extend for miles—over, through or under areas inaccessible to other transportation.

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Link-Belt was a pioneer in belt conveyor engineering, and has been a factor in supplying some of the largest, most complex installations operating today.

Thanks to improvements in belt conveyor component design, weather and adverse operating conditions are practically no limitation on their use.

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A THREE-COMPANY TEAM headed by Harry A. Sosnoski (above) is planning research on special fuels and more efficient ramjet and rocket engines. His group is . . .

Ganging Up on Missiles

Hot on the heels of the announcement of plans to launch an artificial satellite (BW-Aug.6'55,p31) comes word of a three-company research program in the fields of rocketry and supersonic flight.

The participants, already prominent in these fields, are Olin-Mathieson Chemical Corp., the nation's fifth largest chemical company, and two affiliates: Reaction Motors, Inc. of Denville, N. J. (50% owned by Olin) and Marquardt Aircraft Co. of Van Nuys, Calif. (25% interest). Harry A. Sosnoski (above), aviation adviser to the president of Olin-Mathieson, is chairman of the technical liaison committee. The idea of the project is to bring a combination of specialized talents to bear on propulsion problems.

• **From the Ground Up**—Lots of companies, of course, have gotten together on research projects, but this arrangement, known informally as the OMAR program, has some unique features.

They occur partly because the research is taking place in an area where, because of security restrictions, one hand frequently doesn't know what the other is doing.

With this program, for the first time, chemists and engineers—plus an impressive array of supersonic specialists—will all be starting together to produce what Sosnoski calls "a packaged power system of maximum efficiency."

What he's talking about is a completely integrated unit in which each component—fuel, nozzles, combustion chamber, and others—is designed specifically to complement the other.

• **Achievements**—The OMAR program combines research, engineering, and production resources of three companies that have already accomplished quite a bit on their own hook:

Reaction Motors, founded in 1941 by four early members of the American Rocket Society, calls itself "America's first rocket engine company" (BW-

Aug.13'49,p31). Its engines power the Air Force Bell X-1 and X-1A (the first supersonic airplane in this country) and Republic XF-91, as well as the Navy's Douglas Skyrocket. Other RMI engines have powered the Air Force's Convair MX-774 and the Navy's Martin Viking, Convair, and Fairchild Lark missiles.

At present the company is developing components, such as nozzles, fuel pumping systems, and rocket thrust chambers, that are capable of reliable, efficient utilization of high-energy fuels.

Marquardt Aircraft, founded in 1944, has pioneered and is the leading producer of the ramjet engine (BW-Apr.19'52,p143). It calls itself the "West's largest jet engine research and development organization."

Olin-Mathieson Chemical Corp., formed last year by the merger of Olin Industries, Inc., and Mathieson Chemical Corp., is one of the country's giant diversified processing and manufacturing companies (BW-May15'54,p32). The company has been working for several years on special liquid propellants that are capable of performance not possible with conventional types. Hydrazine, used as a fuel in German wartime missiles, is one that has been mentioned (BW-Dec.26'53,p43).

The company has also done a lot of development work on solid propellants. It developed assist-take-off (ATO) units for the Navy, using ball powder. And a solid propellant cartridge for starting turbojet engines is in quantity production at one plant.

• **Military First**—At the moment, packaged power systems of the type that the OMAR group is working on are designed almost entirely for military applications:

• The engines are used as primary and auxiliary power in missiles, aircraft, underwater devices.

• Rocket devices are used for pilot ejection seats and similar gadgets, quick-starting power units, liquid-propellant guns, jet drilling devices, catapults and launchers.

• Ramjets are used as afterburners on turbojet engines.

• For the civilian future, there are possibilities that chemical reactors using rocket principles can be built.

• **Combining Forces**—Each of these uses provides an area for at least two of the companies to team up in trying to work out the most efficient product. Theoretically, such integration to produce an optimum product is at the heart of the whole "weapons systems concept" that the Defense Dept. has been preaching for some time. But in practice, according to Sosnoski, there's still too much effort spent in trying to fit together already available parts instead of designing from the ground up. The result, he says, often is "a cobbled-up end product."

Besides Chairman Sosnoski, a career naval officer with 26 years' service in naval aviation and research, the integrating committee consists of six representatives from the participating companies and one man from the staff of Laurance S. Rockefeller, major stockholder in both Marquardt and RMI. This group will meet once a month at member plants around the country. Last month it met at Niagara Falls; this week it is meeting in Van Nuys.

• **How It Works**—The committee acts as a sort of sounding board for technical information. Prior to each meeting, the agenda is sent around to the committee, so members have time to consider the problems in detail and consult specialists who may know the answers.

The committee does not make policy; it merely presents recommendations to the management of individual companies. However, once an area of mutual interest has been uncovered and investigation approved, the gates are thrown wide open. People at all levels in the companies are free to consult their opposite numbers in other companies on the specialties uncovered by the committee, without going through the committee.

• **Guided Missiles**—The enormity of the problems the committee will be tackling is most apparent in the field of guided missiles.

For the last four years, the government has been spending as much and more on research and development of missiles as it has on aircraft. Missiles are one of the biggest items in the defense budget. When you count in the electronic work on controls and the basic work on the upper atmosphere, missiles probably account for 20% of the country's total research budget. And when you consider that the missile is the logical vehicle for delivering an atom bomb, you can probably tack on another couple of hundred million dollars for work in this area.

Atmosphere. Long-range guided missiles will climb hundreds of miles above the earth, and strike a target thousands of miles away, all in about half an hour. They will be almost impossible to intercept. So they might be the decisive weapons in a future war.

A major obstacle in designing such weapons is our lack of knowledge about the winds, magnetic forces, rays, and distribution of ionized particles, all of which might affect the trajectory and the engine's operating performance. This is an area of basic research where scientists are hopeful of getting some answers during the International Geophysical Year, particularly from the artificial satellite.

• **Much To Be Done**—Some missiles, of course, have been put into production for operational use: Corporal, Honest John, Nike, Terrier, Sparrow, Mata-



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Manufacturers of liquid hand soaps and floor cleaners for sale direct to industries seeks representation in Southeastern, Middle Atlantic, and Midwestern states on a commission basis, with a bonus commission for new accounts. **RW-7104, Business Week.**

Southern Gear Mfg'r expanding sales to industry. Interested in agents or organizations presently selling components to instrument, electronic, and machine mfg'r. etc., capable of selling precision gears and assemblies to customers' specifications. Exclusive areas open throughout the country. **RW-7155, Business Week.**

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Need Representation in Pacific Northwest? Sales metallurgist, presently employed, strong technical background; broad, successful jobs and sales management experience. Desires to represent metal producing or processing firms. **PW-7222, Business Week.**

Public Relations Director or Associate, 29, B.S., chemist with wide & outstanding P.R. & publicity experience. Creative; self-starter. Many important contacts. Will accomplish profitable, far-reaching results. **Box C 322, 350 W. 43 St., N.Y. 26.**

Sales Executive—Building materials qualifications: 1. Over 25 years in sales and of building material industry. 2. Outstanding sales record. 3. Broad experience in selecting, training and directing salesmen. 4. Highly successful in establishing sound distribution. Resume submitted upon request. **PW-7217, Business Week.**

Sales Manager D.C., Md., Va. area. Wide specialty experience. Will represent manufacturer. Commission only. No active in home improvements. **George Flanagan, 3500 14th Street N.W., Washington 19, D.C.**

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Selling Opportunity Wanted

Individual—Est. 30 yrs selling Gov't and trade power tool field Maryland Virginia and D.C. wants one line with good earnings potential excl. basic. References. RA-7364, Business Week.

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Spic and Span Factory Space, Webster, Mass. Average rental 30 cents a square foot for light or heavy industries, humidity controlled, fluorescent lights, sprinkler protected, brick construction. Plenty of water, wired for 110 up to 550 volts. Community will give every assistance. **New Haven R. R. platform siding, Pleasant Irving, See schools, 17 mile lake shore, boating, bathing, recreation area. Wire, write, phone Dudley-Webster Realty Co., South Main Street, Phone Webster 2959.**

BUSINESS OPPORTUNITIES

Wanted: New Product or job work established Connecticut manufacturer desires metal products for hardware or houseware trade. Facilities—tooling, power presses up to 50 tons, general machining, heat treating, assembling and finishing. Nation wide sales set up. **BO-7228, Business Week.**

Company with international connections desires purchase interest in small firm disposing of grinding mill. **BO-7252, Business Week.**

Going Business or Products Wanted: Large, nationally known company desires to acquire products for manufacture, or a going manufacturing business, in hydraulic pumps, hydraulic and pneumatic valves, or thermostatic controls. Products must be small equipment for diversified markets such as automotive, aircraft, industrial, gas, household appliances and central heating industries. Reply with sufficient data to warrant negotiation. **BO-7293, Business Week.**

EQUIPMENT

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dor. But the overwhelming percentage of our missile activity is still in some phase of development. Here are two major problems:

Propellants. There's a big gap between what engine makers want and what is available in the way of propellants (liquid oxygen, JP-4 nitric acid). What's wanted is a low-cost propellant combination (fuel plus oxidizer) with materially higher fuel energy than that of conventional hydrocarbons. It should be self-igniting, nontoxic, remain liquid down to -65C, burn virtually without smoke or flame, and yield no condensable exhaust products. It's a challenge that few chemical companies have accepted.

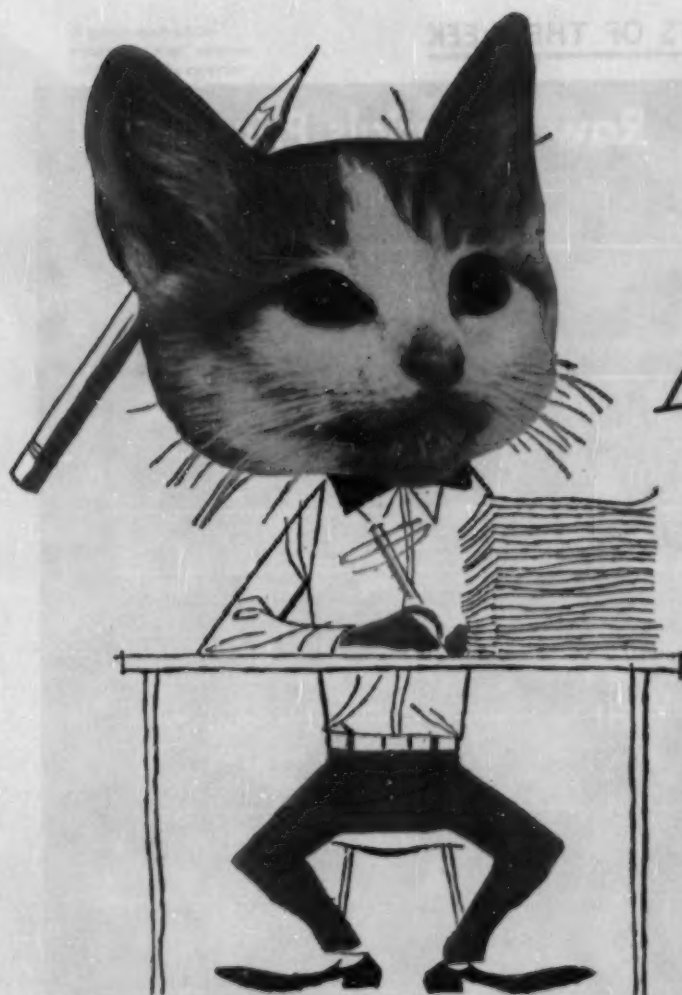
Engines. The problems facing the engine designer mostly involve the need for greater efficiency and reliability, coupled with a pinch in strategic materials. Designers could get more thrust if they could use higher operating temperatures. They'd also like to lighten the engine to get a better relationship of weight to thrust. This puts the finger on strong new lightweight metals. At the moment these metals raise more new manufacturing problems than the technical problems they solve.

RESEARCH BRIEFS

Industrial reactor: AMF Atomics, Inc., subsidiary of American Machine & Foundry Co., announced that seven other major companies are participating in the project to build and operate the first nuclear reactor to be owned and operated by private industry for research in industrial and humanitarian fields. Participants are American Tobacco Co., Continental Can Co., Corning Glass Works, International Nickel Co., Chas. Pfizer & Co., Socony Mobil Oil Co., and U. S. Rubber Co.

Artificial moonlight may light up the New Mexico desert next month. The Air Force, which is conducting the experiment, says a few pounds of sodium will be raised by rocket to an altitude of 60 miles and released as vapor. If it glows, it will confirm a scientific belief that a layer of natural sodium exists at that altitude. It's part of the over-all plan to find out more about the composition of the upper atmosphere for guided missile work.

The effects of overweight and high blood pressure on longevity are being studied by the life insurance business. Fifty U.S. and Canadian companies, with some 50-million ordinary life policies in force, have been invited to participate. It's the first study of mortality in relation to physical build in nearly 25 years.



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best friend
won't
tell you...



We were chatting with a Federal Barge shipper at a box social the other evening, when all of a sudden he took off like a big bird.

Next time we saw him, we asked him how come.

Didn't you see that big, ugly guy come in? he said.

We hadn't, but we said we had. That monster is my biggest competitor, our friend said. You think I want him to know I ship by barge?

Nothing to be ashamed of, we said warmly. What's wrong with saving money?

That's just the point, our friend said. If he knew I shipped by barge, he'd know how I keep my costs lower than his. With barge rates as low as they are, I've got a competitive edge on that rascal—and I want to keep it! So don't let on you know me.

We promised we wouldn't.

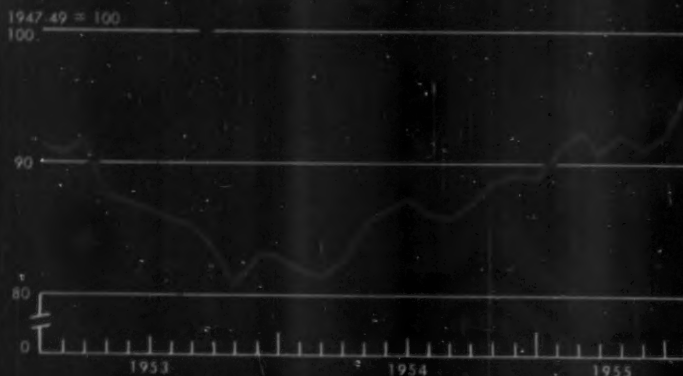


A PRIVATELY OWNED CORPORATION

CHARTS OF THE WEEK

Raw Materials Prices

Raw Industrials



Data: Dept. of Labor.

Natural Rubber

(Smoked Sheets, New York)

Cents per Pound

45.0

40.0

35.0

30.0

25.0

20.0

0

1953

1954

1955

Data: Dept. of Labor.

Tin

(Straits Tin, New York)

Cents per Pound

125

115

105

95

85

75

0

1953

1954

1955

Data: F&M Metal & Mineral Markets. © BUSINESS WEEK

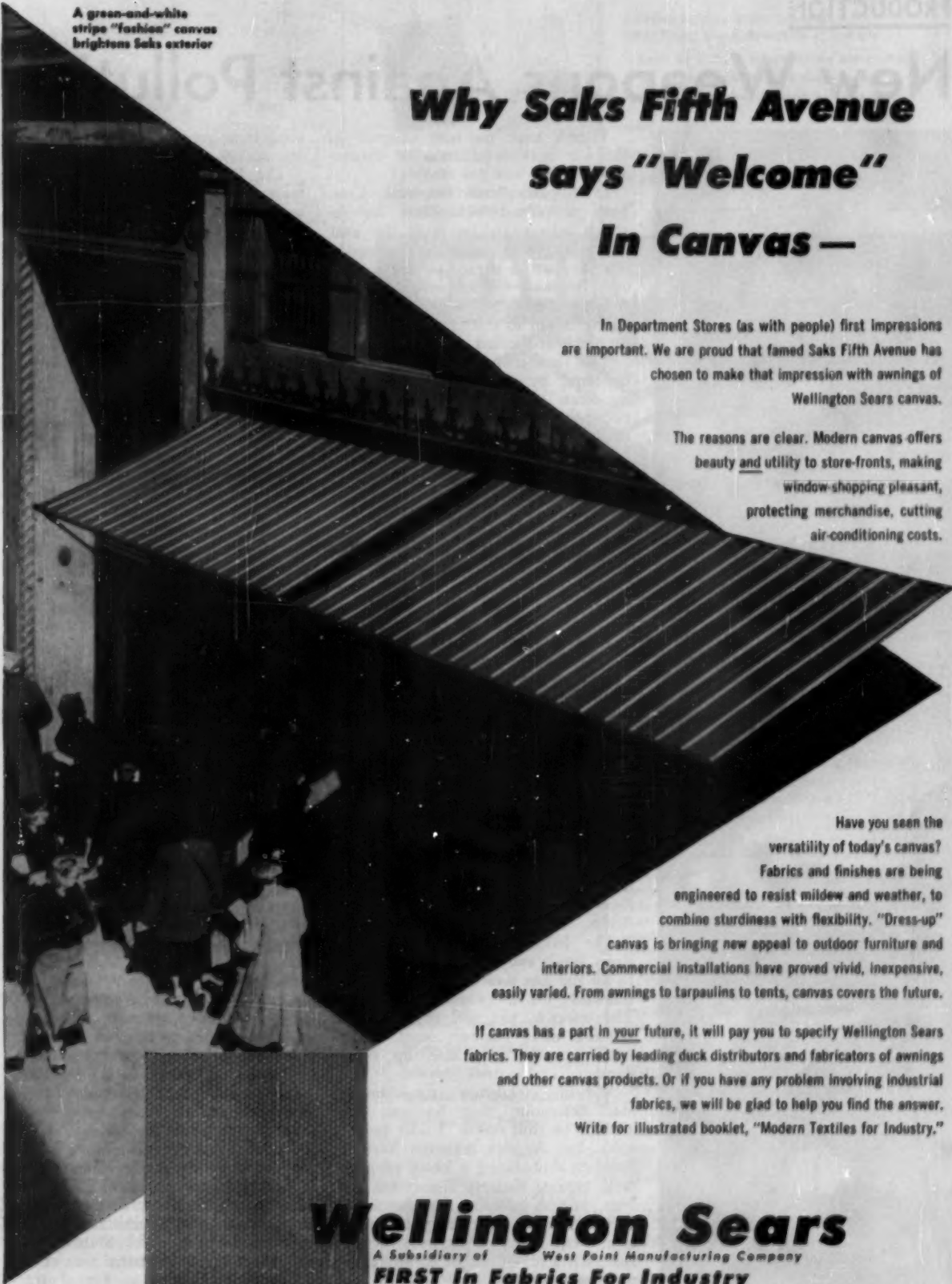
They've Reached a Three-Year High

Prices of raw materials are at their highest level since September, 1952, according to the Bureau of Labor Statistics. By last month the BLS index had climbed back to 95.7 from the post-Korea low of 81.1 in October, 1953.

Rubber is one of the commodities effecting this rise. Natural rubber prices have risen sharply as demand mounted along with the business upturn. Metals

took the steepest climb of all over a year ago—up 39% between February, 1954, to July, 1955. Demand also is up for scrap metals such as iron, steel (BW—Aug. 6 '55, p. 88), and for copper scrap.

Tin prices are at their highest level since May, 1953—stimulated mostly by labor disturbances overseas. Outside speculative interest also has inspired buying of the metal.



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stripe "fashion" canvas
brightens Saks exterior

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New Weapons Against Pollution

There's hope for new weapons in the war against pollution of streams and city air.

In its closing rush last week, Congress authorized \$25-million for research into air pollution in the next five years. And in 1956, the legislators may attack stream pollution, with other millions for research, and with tougher laws and tougher enforcement. A bill to this effect didn't miss by much at the last session.

This action from Washington is bolstered by growing public clamor for clean streams and clean air. Between the two, it's being brought home sharply to companies and municipalities that they will have to figure pollution controls into the costs of operating chemical plants, truck fleets, or sewage systems.

I. Troubles in the Air

Industry is already facing heavy expenses for control. Thus large power plants and steel mills often spend millions for equipment to trap grit, and for the hauling away of the waste. Frequently, companies comply fully with local anti-pollution rules, only to find that smog, say, recurs.

Failures of this sort can result from local topography, as in Los Angeles. Or automobile exhaust fumes may turn out to be the culprit. It takes really basic research, covering wide areas of space and time, to solve these problems. Local industries and local government can't afford this sort of study, nor have they the means of coordinating their limited efforts with other local outfits.

The federal programs, with their wider funds and scope, should be able to fill the gap, and to set up common standards for the community efforts. The research, too, will go far to determine what business must do to muffle smoke and clean up liquid wastes.

And—in emergency conditions—it may determine that business may actually be shut down. Under present rules, Los Angeles refineries have refused to shut during a heavy smog attack, arguing that no connection had been proved between the fumes and their operation. (Actually, the smog soon went away, of its own accord.) But such a refusal might be impossible under stricter laws.

• **Protection**—On the other side of the coin, federal research may also establish how much protection business

needs from freewheeling local gripes and over-zealous political action.

The Public Health Service will be tying into air pollution research in the next 10 months, armed with three times the \$600,000 that Congress originally put up. It's planning to attack such angles as:

- Wind tunnel studies of how pollutants from various types of plants are dispersed in the air—an idea already tried by Consolidated Edison Co. (BW—Dec. 10 '49, p. 64).

- Establishing whether given amounts of pollutant will stunt growth of cultures of living tissue.

- Developing instruments to measure the amount of auto exhaust and other gassy chemicals in the air.

- **Personnel**—PHS is also planning to offer short training courses for the employees of local control agencies. Previous efforts at control have been hampered by the scarcity of technicians. And business has wailed that local enforcement groups may understand the laws, but certainly don't understand the technical difficulties of curbing pollution.

Essentially, the expanded federal attack on air pollution is based on extensive technical and research support of local activities.

II. Water Is Different

Water pollution is a different breed of cat. Here, the problem extends far beyond the bounds of any one community. Smoke, or smog, or smaze generally afflicts only the area where it is generated; the fumes disperse before they move in on another community in any effective concentration. But water pours in fixed channels; a downstream city cannot go away, or find a new river, just because its supply has been polluted upstream. This trouble is intensified by the ever increasing demands for water for farm, municipal, and industrial use. Frequently, water has to be used several times—one plant's waste may be the "fresh" water of another, farther along the line.

Polluted waters flow merrily across state lines, which is why industry has welcomed voluntary control agreements between state governments. Some of these are merely administrative pacts, such as the New York State-Ontario deal covering the industrial area of the Niagara River. Others are formal agreements, passed by state legislatures and confirmed by Congress. Among the areas covered by such formal deals are:



the Ohio and Potomac river basins, New York harbor, and New England.

• **Enforcement**—Many other areas are not covered, and many states either cannot or will not get together. To overcome this lack, Congress in 1948 passed a water pollution control act, providing for research, for grants in aid to states and to interstate groups, and—most important—for federal enforcement where states had not acted.

This enforcement procedure, in its final step, provided that the PHS could hale the polluter into court—but only with the permission of the pollutor's state. The House Appropriations Committee has labeled this provision "almost unenforceable," and this year an attempt was made to modify it. The Senate actually passed a bill that would have allowed last-resort court action at the request of the downstream state. The measure got tangled in the end-of-session jam in the House. Its failure to pass also doomed an attached \$3.3-million appropriation for research during the current year.

Right now, it looks as if the whole bill is a good bet to pass early in 1956, but it is unlikely that any money will be allocated for use before the beginning of next July.

III. Where to Begin

Meanwhile, PHS is already doing a certain amount of research on both air and water pollution at its Taft Engineering Center, in Cincinnati. With the hope of more funds later, officials are mapping out key projects.

One of these is the development of sensitive tests for the components of industrial waste, some of which become noticeable in concentrations of less than one part in a million. Automatic devices are needed to warn of the presence of such contaminants as the cyanides. All these testing devices would be useful to the operators of waterside plants.

Under the terms of the delayed bill, PHS could contract with private companies or individuals. It would also provide research fellowships that would steer promising graduate students into the field of pollution abatement.

The bill would also express the intent of Congress that federal installations install needed control procedures. Even without this, there has been some progress—at such locations as the Newport (R.I.) naval base, and the Military Academy at West Point. Even Governor's Island, which has been discharging raw sewage into New York harbor's Buttermilk Channel for over 150 years, is about to hook into a city sewer line. This rider might even help executive agencies get money from the appropriations committees. **END**



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PRODUCTION BRIEFS

Autobreader is the name for an automatic electronic assembly method patented by Emerson Radio & Phonograph Corp. It produces a printed circuit, inspects the circuit for correct adjustment, and discards it if electronically inaccurate. A unit, dubbed a "limit standard," gives each processing step a sense of value for making adjustments. Manual labor is needed only for delivering raw materials and removing finished products.

Another road goes piggyback: Louisville & Nashville RR will start hauling trailers on flatcars between Birmingham, New Orleans, and Louisville next week. All movements from pickup to delivery will be handled exclusively by L&N, which claims the first door-to-door service by a major Southern road.

Jet engine overhauling for the Air Force is now handled by Southwest Airmotive Co., Dallas, the first civilian company other than engine manufacturers to do the job. For around \$3-million, Southwest will overhaul 1,200 J-33 engines under contract.

Safer door latches are slated as standard equipment on Studebaker's 1956 models. Designed to interlock with the frame, the latches keep the doors closed in a collision. One test car went head-on into a concrete barricade at 40 mph. without springing them.

To get into titanium, Columbia-Southwestern Chemical Corp. and Imperial Chemical Industries, Ltd., are trying to swing a deal with the U.S. government: They'll build a \$10-million plant at Natrium, W. Va., using a new process. The government must buy the plant's annual output of 5,000 tons for a 5-year period. The contract's chances, some say, are slim because titanium production is currently running far ahead of its consumption.

Three-million precision gears is the annual capacity of a mechanized machining line engineered by General Motors' Buick Motor Div. At 15 different points, gauges check the gear dimensions, reset the machining if it's out of tolerance. The gears are for Buick's Dynaflo transmission.

Synthetic rubber processing is expanding at Firestone Tire & Rubber Co. Output at Firestone's Lake Charles (La.) plant is being hiked to 150,000 tons, 50% over its rating when it was purchased last April.



H. H. Windsor, Jr., Editor and Publisher, Popular Mechanics Magazine, also says—

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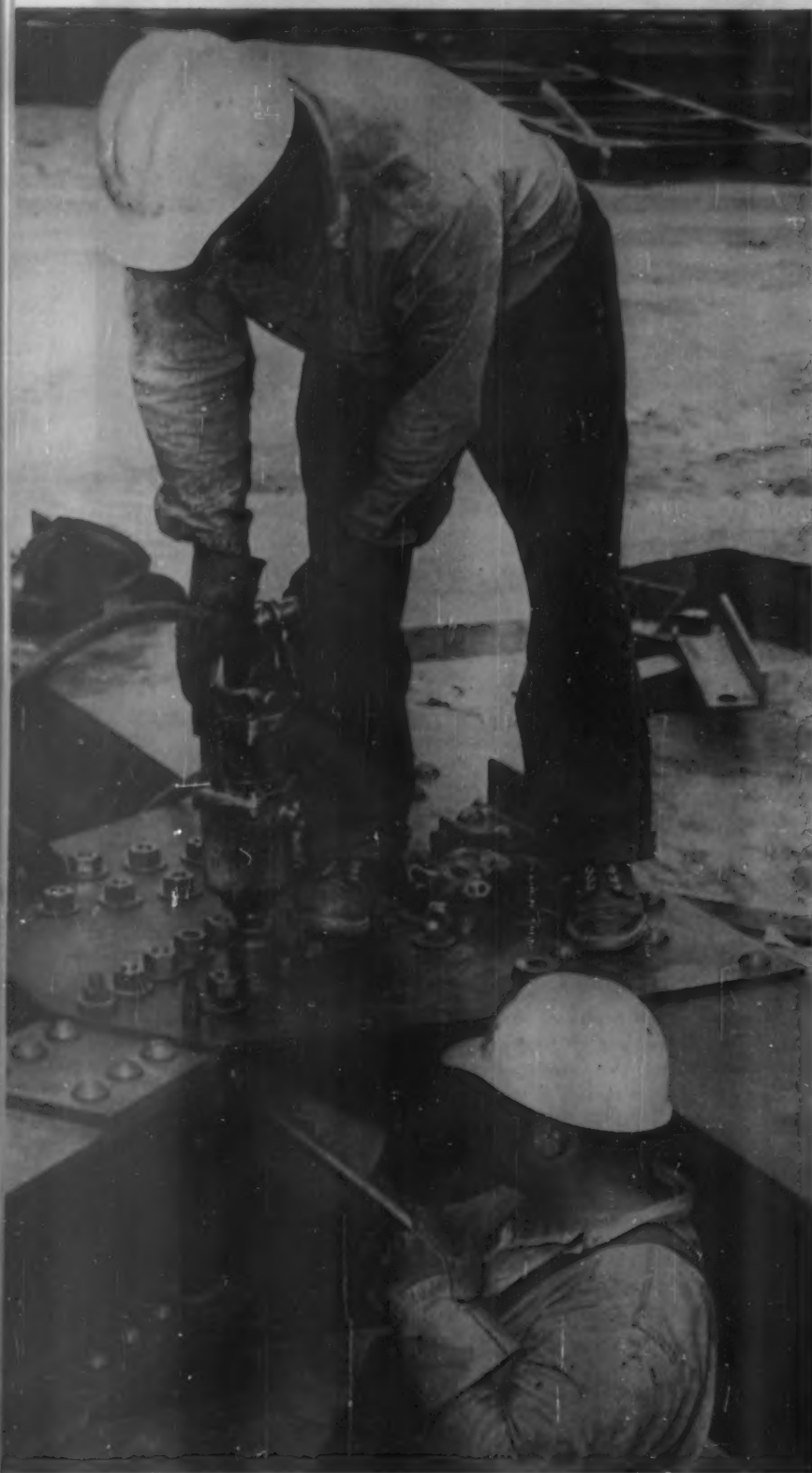
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Building Crews Discover the Nut



The workmen in the picture are symbolic of a trend that is showing up these days in the steel construction field. They are putting a building's frame together with bolts. A couple of years ago, a four-man riveting crew would have done this job.

Bolting has not pushed the rivet out of the construction picture. About 70% of all steel construction is still put together with rivets. Bolts and welded joints account for the other 30%, each taking about half of it. But bolting has moved ahead much faster than either riveting or welding. In five years, experienced observers in the industry predict that bolts will take first place, with about 50% of all steel construction.

• **Born of Need**—Two or three years ago, you had to look hard to find a bolted structure anywhere. Probably less than 2% of all structural steel was put together with bolts during 1952. Then, almost overnight, bolted frames started to pop up. One of the first was an Atomic Energy Commission building at Oak Ridge, Tenn., which is one of the largest steel structures erected in the U.S. since World War II. Contractors on the job were forced to use bolts because riveting crews at that time were scarce.

• **Toehold**—It was this scarcity, in fact, that gave the bolt a toehold. But a couple of other factors have been responsible for the headway it has made. One is speed. A bolt crew can whip through a big job much faster than a crew of riveters can, usually making it possible to put a steel skeleton together in six months' time, a month less time than a riveting crew would need.

Another advantage of bolts is that two men can do the work. Riveting demands four. In a pinch, one man can do a bolting job. Furthermore, a bolt crew can be put together and trained to operate efficiently in a week or so, where a riveting gang works together for a year or more to develop real teamwork.

• **Inertia**—Bolting enthusiasts, a growing clan in the construction industry, insist that inertia is the only thing that keeps the bolt from dominating the field. They complain that out-dated building codes in several major cities still demand riveted frames. Philadelphia, Boston, and New York are three cities whose codes have not been changed, though all three may be changed before the end of the year. New York has waived its ban in a few instances. The city's first bolted building—an apartment house—went into construction four months ago.

and Bolt

• **Costs**—Purely on the basis of initial cost, bolting seems to be more expensive than riveting. You can buy a rivet for about 7¢, where a bolt and nut of the same size costs 35¢.

The reason is that bolts must be produced with more precision than rivets. (For structural application, they must possess greater strength than ordinary bolts. Thus, bolts produced for structural use are called high-strength bolts to distinguish them from other kinds of bolts.)

But the price spread closes quickly once bolts and rivets begin to compete in erection. Because bolting is so much faster, the high initial cost for bolts ceases to mean much.

• **Bolt Strength**—The real test of strength for any fastener is in the internal tension that can be produced between its two clamping ends. The strength of a 1-in. rivet, for example, under maximum tension, will be about 22,000 lb. A bolt of the same thickness can exert more tension between the head and the nut. A 1-in. bolt's strength is about 42,000 lb., almost twice that of a rivet.

Furthermore, rivets frequently work loose, particularly if the structure that they hold together is not under a constant load. San Francisco's Golden Gate Bridge, for example, originally was put together with rivets. But a bridge is one structure that must stand up under varying loads, due both to increases and decreases in the volume of traffic that flows over it and to the winds that blow against it. Both cause the bridge to flex.

This constant flexing has caused rivets on the Golden Gate Bridge to work loose. One by one, those rivets are being replaced with bolts. This is happening on other bridges, too, particularly in the Great Lakes region. Ore bridges swing open often, another condition that causes rivets to work loose. These, too, are switching to bolted construction.

• **Buildings**—The biggest future for bolts seems to be in the steel frames of apartments and office buildings. Here, bolts hold another advantage over rivets: Bolting is not so noisy.

• **The Producers**—For the companies in the bolt-producing business—the four biggest producers are Bethlehem Steel Co., Lamson & Sessions Co., Pittsburgh Screw & Bolt Corp., and Russell, Burdall & Ward Bolt & Nut Co.—the switch to bolts has pushed them into a boom. By 1960, according to Russell, Burdall & Ward's calculation, bolting will have passed riveting, despite the rivet's big lead today. **END**

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PERSPECTOGRAPH cuts by hours the time needed to make a perspective sketch. It's . . .

A Shortcut for the Draftsman

Making sketches in perspective takes a lot of drafting skill. The spiral staircase shown at the right (above) would take a professional draftsman about four hours to reproduce from the two drawings at the left.

With the new device shown in the picture, called the Perspectograph, the staircase was sketched in much less time. Perspectograph Corp., which manufactures the unit, says that a semiskilled draftsman can run off such a sketch in an hour.

The Perspectograph was designed by Ramon Jean Leon Negri, a French mathematician, who worked 13 years to perfect it. In France, it has been used to make perspective drawings for motion picture companies.

Units of its American counterpart, which will be in production next month, have been ordered by several organizations that produce a lot of perspective drawings from engineering blueprints. Early customers: Atomic Energy Commission and Port of New York Authority.

Up to this time, most perspective-drawing instruments have been more complex and more expensive than the Perspectograph, which will sell for about \$275.

• **How It Works**—The device can be fastened to any drawing board. By means of the calibrated sweep arm, at the far left, and an abacus chart of curves that is mounted on the cylinder that extends upward from the bottom

of the drawing board, a draftsman can translate an orthographic drawing—which is simply a top view and a side view of the same object—into a perspective drawing. The device shows him where to plot points. When he connects them up, he has a perspective. Work ordinarily required in the creation of a perspective drawing—such as locating a vanishing point and drawing of construction lines—is eliminated.

The Perspectograph is designed to produce a worm's-eye view as well as a bird's-eye view. Also, it works backwards as well as forward, translating perspective drawings into orthographics. It has been used experimentally to copy tracings made from photographs.

• **Time Saved**—The company says that a perspective of, say, a centrifugal pump takes about 12 hours when it is done conventionally. With the new instrument, Perspectograph says that the same perspective can be made in six hours. An architectural drawing of an industrial building that takes eight hours to produce conventionally takes three hours with the instrument. The company is also producing a special attachment that makes it possible to produce perspective drawings from piping diagrams and electrical schematics. It claims that such drawings can be produced in perspective in one-third the time that conventional perspective drawings take.

Edward W. Lewis, president of Perspectograph Corp., says that the most

difficult perspective drawings can be produced with accuracy in far less time than such drawings are produced now by skilled perspective draftsmen. He predicts that the instrument will bring a new concept of technical illustration to the drafting room.

• **Source:** Perspectograph Corp., 285 Madison Ave., New York 17.

NEW PRODUCTS BRIEFS

A "sponge" for light, called Luxorb, is a development of Northrop Aircraft, Inc., and produced under license by William I. Mann Co., Monrovia, Calif. Applied in liquid form to a prism's edge, it absorbs more light and gives a sharper, glare-free image. The applications are in telescopes, gun sights, microscopes, and cameras.

An aluminum foil that's coated with porcelain enamels of any color is being made by Ferro Corp. of Cleveland. The company thinks it might replace mirror walls, enamel-covered steel used by the construction industry. The foil version is pliable, easily fitted, and doesn't have edges that rust. Ferro will issue licenses to its clients, but won't talk costs because it's only now in the pilot plant stage.

For sales presentations, Exhib-A-Pac looks like a medium-sized suitcase when not in use, unfolds to form a display for products. It has a sloping display panel, two others for charts and the like, fluorescent lighting, and wrought iron legs. The unit is custom designed and sells for \$75 and up by Gardner Displays, 477 Melwood St., Pittsburgh.

A tinless, organic solder has special features for the canning business, says Dewey & Almy Chemical Co., Cambridge, Mass. It works on plain metal cans and most of those lined with lacquers. Temperatures used in normal food processing don't affect its bond. D&A claims an average strength 15 lb. greater than tin-lead solders.

A collar-like guard for paint cans is made from a Bakelite plastic by NoMus Products, Inc., Minneapolis 16. It fits into the lid recess of an open can, cuts down messiness in mixing, pouring, and brushing. NoMus claims that the chemicals found in most paints won't harm the polyethylene plastic.

A silicone-treated felt of Felters Co., Boston, is particularly suited to fashion garments, according to the manufacturer. The silicone makes the felt more resistant to water and water-borne stains, improves wrinkle recovery, and gives it a silkier hand.

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 Philadelphia 3....B. Bernard Alexander, Willis B. Brown, Jr., E. R. Robertson, Architects Bldg., 17th & Sanson Sts., Rittenhouse 4-0570
 Pittsburgh 22....John P. Taylor, 918 Oliver Bldg., Atlantic 1-6707
 St. Louis 3....David B. Conner, Continental Bldg., 3615 Olive St., Jefferson 5-4667
 San Francisco 4....John W. Osterman, 66 Post Street, Douglas 2-4500

Straws in the Russian Wind

Dispatches from London report that Whitehall is appalled at the violent swing of U. S. public opinion toward Russia that has followed the summit meeting. The British are worrying again over the mercurial nature of their American allies; a characteristic which, in the past, wrenched us from isolationism to internationalism and makes our friends and enemies alike wonder whether the stand we take today is the same one we will hold tomorrow.

It is not easy to reassure the British. The aspiration for peace and harmonious relations with the world is so strong in the American people that they have a compulsive will to believe that Russia can change and that the cold war can be ended.

What happened at Geneva looked hopeful; the enthusiastic reception the Soviet agricultural delegation received in the Midwest and the very human response of the junketing Russians suggested the universal brotherhood of man. Similar experiences of the American farmers touring the Soviet farm belt underlined that impression. Plans for sending an American company to perform *Porgy & Bess* in Moscow and to receive the Peiping opera company in New York, along with other projected cultural exchanges, indicate a possible dismantlement of the Iron Curtain.

But though all these signs seem to point in the same direction, they are—along with the gesture of the Red Chinese in freeing the American airmen—only straws in the wind. Those Americans who so hopefully grasp them will find they provide only meager support for the belief that Russia and world communism have changed to the point where free people are no longer threatened. Unless there follows much weightier and more concrete evidence, Russia's present tack may soon be exposed as a new maneuver designed to undermine America's will to remain strong and to defend its principles.

The British can take strength from the knowledge that Pres. Eisenhower and Secy. of State Dulles are not so easily taken in, and that when an issue is drawn, the faith in them of the American people is strong enough to mobilize and solidify American opinion.

What Brakes Are For

There's no use pretending that the Federal Reserve System's new policy of credit restraint (BW—Aug. 6 '55, p25) is a popular one. The Fed is in the uncomfortable position of a chaperone who has ordered the punch bowl removed just as the party was starting to warm up. It is things like this that have given chaperones a bad name all the way down through history.

If it is any comfort to the nation's money managers, we think that the economic historians of the future will give them high marks for responsible exercise of authority at precisely the right moment.

There have been plenty of signs in the past month or

so that the party was getting too rowdy. What started as a healthy recovery from the 1954 recession now threatens to become an inflationary jag.

It would have been easy for the authorities to coast along, letting credit flow out more and more freely in response to more and more speculative demands. The first stages of inflation are always fun. And nobody likes to be a wet blanket—not even a central banker.

It would have been easy, but it would have been deadly dangerous. It would have proved what the cynics have often alleged—that effective money management calls for more brains and backbone than any group of money managers can muster.

By switching at this point to a policy of restraint, the Federal Reserve has exhibited not only brains and backbone but also a nice sense of timing. It has given the country in general a badly needed assurance that we are not about to repeat all the mistakes of 1928 and 1929.

Businessmen are going to feel the pinch of the new policy. It is never possible to tighten the credit screws without hurting people. But we think that most businessmen will accept the decision with good grace. The monetary authorities are doing just exactly what they are supposed to do. And business in general six months or a year from now will be a lot healthier as a result.

The 84th's Record

In our system of government, a fundamental division between legislature and executive always creates difficulties. You need to keep that fact in mind in evaluating the record of the first session of the 84th Congress.

In this perspective, the record of the 84th is not bad. It proved much more cooperative than the 80th Congress of 1947-48, which sat during Pres. Truman's term, or the 72nd Congress of 1931-32, which plagued Pres. Hoover.

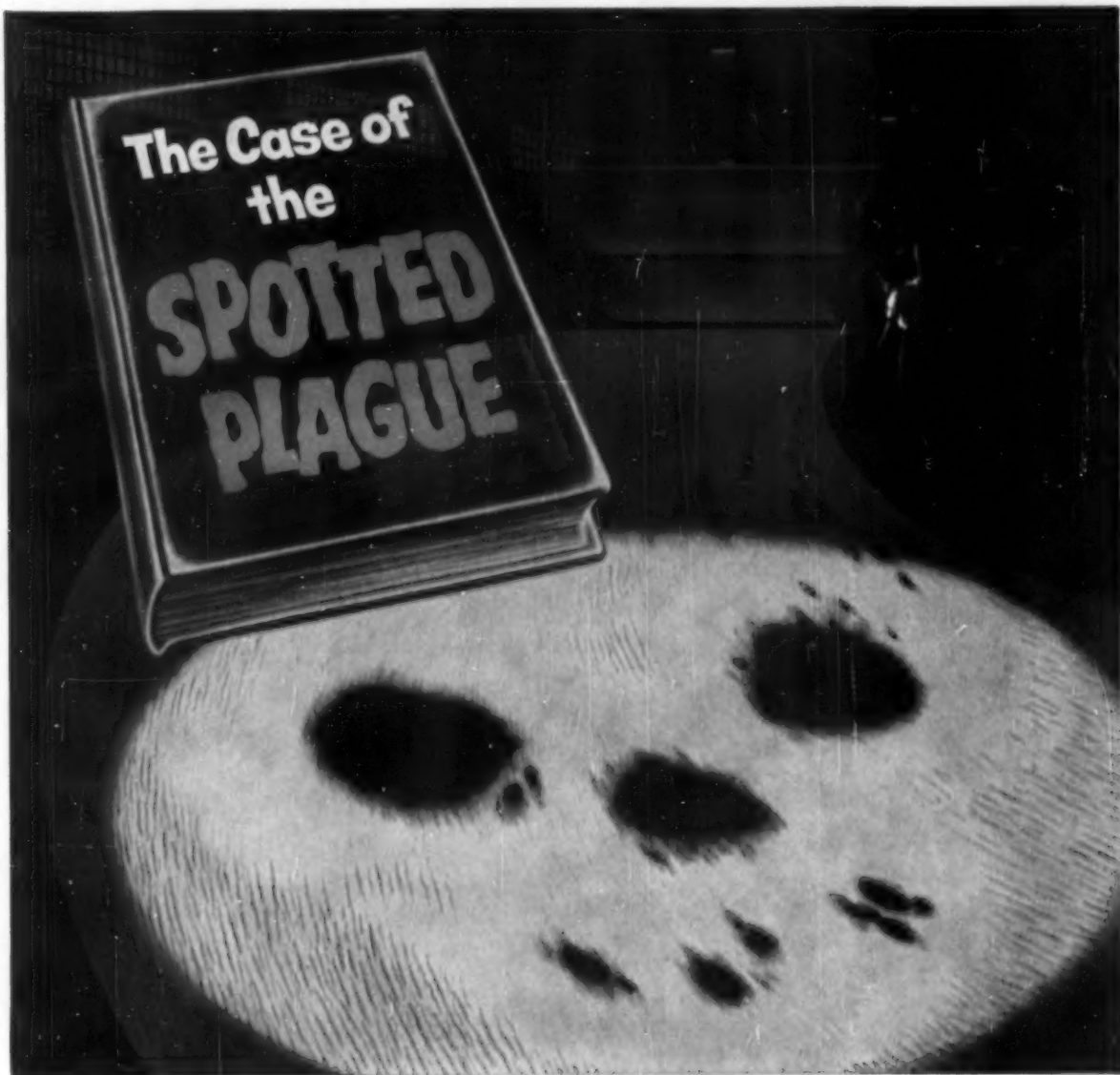
Pres. Eisenhower himself had feared that the split would lead to a "cold war of partisan politics." But in foreign affairs, and particularly through the leadership of Sen. Walter F. George, Congress scrupulously maintained a bipartisan approach.

There was much less cooperation on domestic policy. The President has said that, though progress has been made, a number of Administration proposals "absolutely vital to our future" were not put through.

Congress did not give the President all he wanted, but little of the legislation it did pass was obnoxious to him. For example, the Democratic proposal to put through a \$20-a-head cut in personal income taxes never had a chance to become a major issue.

It is also true that the Democrats had few chances to exploit political issues. The President's popularity and the economy's prosperity have been hard to challenge. But this was a political off-year.

If there is as good cooperation in 1956, then the 84th really will be exceptional.



**How
Correct Lubrication
cured it — and saved
\$10,000 a year!**

Stretched taut between two endless tenter chains, the broad band of felt revolved slowly through the long, cavernous dryer. This was premium, snow-white felt, handled with special care to prevent staining. But repeatedly, despite all precautions, the felt emerged dotted with ugly dark spots.

For years, these black spots had plagued a large felt plant. They knew the cause...grease and oil, used on chains and rollers, melted under dryer heat of 240°F. and dripped down on the felt. All attempts at a cure had failed. Production loss was \$10,000 annually!

Socony Mobil men, making an analysis of plant machinery, tackled this problem at once. After careful study they recommended special Gargoyle lubricants, set up proper lubrication schedules, trained plant personnel in new application methods. Today, at an annual cost of \$30 for dryer lubricants, the company is saving the \$10,000 it previously lost!

This entire plant is now protected by a program of Correct Lubrication that has improved production and cut costs in every department. Why not see what such a program can do for you?



SOCONY MOBIL *Correct Lubrication*
FIRST STEP IN CUTTING COSTS

SOCONY MOBIL OIL CO., INC., and Affiliates: MAGNOLIA PETROLEUM CO., GENERAL PETROLEUM CORP.,
Formerly Socony-Vacuum Oil Company, Inc.

The bomb that's built not to explode

THE cylinder below is called an accumulator. It's used in aircraft, principally to store hydraulic pressure for raising and lowering, landing gear and wing flaps. The working pressure amounts to 3,000 pounds per square inch—so great that faulty material or construction would cause the accumulator to burst with all the deadly explosive power of a bomb. But *this* bomb is built *not* to explode.

The Parker Appliance Company was plagued with variations in the quality and strength of the steel it was using for these accumulators. Defects showed up after machining, and rejects were running at a high rate. So Parker called in metallurgists of the Timken Company for assistance in solving the problem.

They studied the requirements and recommended a certain analysis of Tim-

ken® fine alloy seamless steel tubing, specially heat treated for this application. The result: Since switching to this Timken steel, Parker reports that rejects are a rarity. Each accumulator is tested at 6,000 pounds per square inch—twice its working capacity.

This is one of hundreds of problems that have been stamped "Solved by Timken Alloy Steel". If you have a special steel problem, let our metallurgists help you solve it. Write: The Timken Roller Bearing Company, Steel and Tube Division, Canton 6, Ohio. Cable address: "TIMROSCO". Tapered Roller Bearings, Alloy Steels and Seamless Tubing, Removable Rock Bits.



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AND GRAPHITIC TOOL STEELS